IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

INTELLECTUAL VENTURES II LLC, *Plaintiff,* v. FEDEX CORPORATION, FEDERAL EXPRESS CORPORATION, FEDEX GROUND PACKAGE SYSTEM, INC., FEDEX FREIGHT, INC., FEDEX CUSTOM CRITICAL, INC., FEDEX OFFICE AND PRINT SERVICES, INC., GENCO DISTRIBUTION SYSTEM, INC., *Defendants,*	§ § § § § § § § § § § § § § § § §	Case No. 2:16-CV-00980-JRG

MEMORANDUM OPINION AND ORDER

On October 26, 2017, the Court held a hearing to determine the proper construction of the disputed claim terms in United States Patent Nos. 6,633,900 ("the '900 Patent"); 6,909,356 ("the '356 Patent"); 7,199,715 ("the '715 Patent"); 8,494,581 ("the '581 Patent"); and 9,047,586 ("the '586 Patent") (collectively "the Asserted Patents"). The Court has considered the arguments made by the parties at the hearing and in their claim construction briefs. Dkt. Nos. 91, 102, 106, & 119.[1] The Court has also considered the intrinsic evidence and made subsidiary factual findings about the extrinsic evidence. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The Court issues this Claim Construction Memorandum and Order in light of these considerations.

[1] Citations to the parties' filings are to the filing's number in the docket (Dkt. No.) and pin cites are to the page numbers assigned through ECF.

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I. BACKGROUND

A. The ’900 Patent

The ’900 Patent was filed on January 8, 1999, issued on October 14, 2003, and is titled “Mobile Crew Management System for Distributing Work Order Assignments to Mobile Field Crew Units.” The ’900 Patent relates to a system for multi-crew management that includes “an enterprise computing system, a mobile field unit, and wireless communication network which supports terminal control protocol/internet protocol (TCP/IP).” ’900 at Abstract. The specification states that the enterprise computing network includes “application programs through which work orders may be assigned and managed, various server machines containing data related to the work orders, a local area network (LAN) connecting the server machines, and a gateway to the TCP/IP wireless network.” *Id.* The specification further states that the mobile field unit includes “a computing device and modem for communicating over the wireless network to the enterprise computing system.” *Id.* The specification adds that “[a] mobile field unit and each machine in the enterprise computing system has a unique IP address assigned to it.” *Id.*

Claim 1 of the ’900 Patent is an exemplary claim and recites the following elements (disputed term in italics):

> 1. A method for distributing *work order assignment data* to a *field crew* using *a system having an enterprise computing system and at least one mobile field unit*, comprising the following steps:
> (A) updating a database on the enterprise computing system to indicate an assignment has been assigned to the *field crew*;
> (B) notifying the *field crew* of the assignment;
> (C) *in response to the input of field crew login data, verifying field crew identity*;
> (D) notifying the *field crew* of successful login;
> (E) retrieving and presenting a list of assignments to the *field crew*;
> (F) in response to *field crew* input selecting an assignment from the list of assignments, *retrieving detailed assignment data* for the selected assignment;

(G) displaying the detailed assignment data to the *field crew*; and
(H) in response to *field crew* input identifying an action was taken with regard to the assignment, updating the detailed assignment data.

B. The ’356 Patent

The ’356 Patent was filed on November 2, 2001, issued on June 21, 2005, and is titled “Method and Apparatus for Associating the Movement of Goods with the Identity of an Individual Moving the Goods.” The ’356 Patent relates to a tracking system that “monitors an entity that enters a controlled space and the addition, removal, or other movement or status changes of objects in the controlled space.” ’356 Patent at Abstract. The specification discloses a computer system that is “coupled to the tracking system, automatically associates the addition, removal or other movement or status changes of the objects with the identity of the entity and transmits this information to a server computer system.” *Id.* The specification adds that “[a] user may subsequently access this information through one or more client computers coupled to the server computer system.” *Id.* The specification further states that “[t]he server computer system may also automatically notify a user or other computer systems, e.g., through a network interface, wireless interface, or telephone interface, when objects in the controlled space have been moved or the status has been changed and/or whether such movement or status change is authorized or not.” *Id.*

Claim 1 of the ’356 Patent is an exemplary claim and recites the following elements (disputed term in italics):

1. A method, comprising:
obtaining identity information regarding an entity which enters a controlled space;
monitoring, using a wireless tracking system communicatively coupled to a computer system, *locations and movements of the entity and objects within the controlled space*
automatically associating, using the computer system, the identity information regarding the entity with status information regarding additions, removals, returns,

defective status, or movements of the objects to/from/within the controlled space; and

transmitting the status information and the associated identity information to a server communicatively coupled to the computer system and configured to automatically notify a user of the status information, wherein at least one of the objects is automatically returned or picked up as a result of such notification.

C. The '715 Patent

The '715 Patent was filed on March 1, 2005, issued on April 3, 2007, and is titled "System and Method for Tracking ID Tags Using a Data Structure of Tag Reads." The '715 Patent relates to "[a] system and method of tracking tags at several successive points of a business process." '715 at Abstract. The specification states that "[a] reader attempts to read each tag at each successive point," and that "[a] processor populates a database with information corresponding to the reading of each tag at each successive point and the time of each reading." *Id.* The specification adds that "[a] tool modifies part of the information in the database as a function of other information in the database." *Id.* The specification concludes that "[t]he modified information is used to track the tags through the business process." *Id.*

Claim 1 of the '715 Patent is an exemplary claim and recites the following elements (disputed term in italics):

1. A method of *tracking tags at several successive points of a business process*, said method comprising:

attempting to read each tag at each successive point;

populating a database with information corresponding to the reading of each tag at each successive point and the time of each reading;

modifying part of the information in the database as a function of other information in the database; and

using the modified information to track the tags through the business process.

D. The ’581 Patent

The ’581 Patent was filed on August 25, 2009, issued on July 23, 2013, and is titled “System and Methods for Management of Mobile Field Assets via Wireless Handheld Devices.” The ’581 Patent relates to using enterprise servers to communicate to handheld devices in the field to support dispatch, data synchronization, logistics and personnel. ’581 Patent at Abstract. The specification states that “[b]i-directional data delivery from enterprise-based servers over wireless data networks is enabled using wireless capabilities resident in handheld personal computing devices.” *Id.* The specification further states that “[r]eal time communications facilitates real-time access to remote programs, assistance and/or information related to the field operations and asset (personnel and inventory) resource management.” *Id.*

Claim 7 of the ’581 Patent is an exemplary claim and recites the following elements (disputed term in italics):

> 7. A *handheld device*, comprising:
> a *communication module* configured to *download a field management program* stored in a computing device located remotely from the *handheld device*;
> a memory configured to store the field management program after the download;
> a *position module* configured to enable identifying a geographic location of the *handheld device*; and a
> processor configured to execute the stored field management program to enable collecting field data associated with a field assessment while at a field;
> wherein the c*ommunication module* is further configured to communicate the field data and the geographic location of the *handheld device* to the computing device.

E. The ’586 Patent

The ’586 Patent was filed on March 9, 2012, issued on June 2, 2015, and is titled “Systems for Tagged Bar Code Data Interchange.” The ’586 Patent relates to a method of tagged bar code data interchange that “includes creating electronic and/or printed documents with tagged bar coded

information, capturing and decoding the tagged bar coded information, caching the tagged bar coded information, parsing the bar coded data tags, stripping the data tags, and inputting/storing the bar coded information." '586 Patent at Abstract. The specification states that the "[b]usiness can be conducted on-line using e-mail transmissions of video displayed tagged bar coded information." *Id.* The specification further states that "[s]uch tagged bar coded information can be stored and/or input into style sheets that are in common or company-specific formats." *Id.* The specification adds that "companies can receive consumer information in a format that is easily accessible by any portion, affiliate, subsidiary, or related entity of the company, no matter what software system is running."

Claim 7 of the '586 Patent is an exemplary claim and recites the following elements (disputed term in italics):

> 7. A computer-readable storage device storing computer executable instructions that are executable by a computer system to cause the computer system to perform *operations for data interchange*, the operations comprising:
> *creating an electronic document having a plurality of bar codes, wherein the plurality of bar codes encode respective data tags and data items*, and wherein at least one of the *data tags* includes *an identifier identifying one of the data items*; and
> *sending the electronic document* for *decoding of a first one of the plurality of bar codes to recover a first data tag and a first data item*.

II. APPLICABLE LAW

This Court's claim construction analysis is guided by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the Federal Circuit reiterated that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d at 1312. The starting point in construing such claims is their ordinary and customary meaning, which "is the meaning that the term would have to a person of

ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1312-13.

However, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* at 1313. For this reason, the specification is often 'the single best guide to the meaning of a disputed term.'" *Id.*at 1315. However, it is the claims, not the specification, which set forth the limits of the patentee's invention. *Id.* at 1312. Thus, "it is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004). Other asserted or unasserted claims can also aid in determining a claim's meaning. *See, e.g., Phillips,* 415 F.3d at 1314 (use of "steel baffles" and "baffles" implied that "baffles" did not inherently refer to objects made of steel).

The prosecution history also plays an important role in claim interpretation as intrinsic evidence of how the U.S. Patent and Trademark Office ("PTO") and the inventor understood the patent. *Phillips,* 415 F.3d at 1317. *See also Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that "a patentee's statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation"); *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1361 (Fed. Cir. 2017) (applying this principle in the context of *inter partes* review proceedings). However, "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes."

Id. at 1318. *See also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be "unhelpful as an interpretive resource").

In addition to intrinsic evidence, courts may rely on extrinsic evidence such as "expert and inventor testimony, dictionaries, and learned treatises." *Id.* at 1317. As the Supreme Court recently explained:

> In some cases . . . the district court will need to look beyond the patent's intrinsic evidence . . . to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 841 (2015). However, the Federal Circuit has emphasized that such extrinsic evidence is subordinate to intrinsic evidence. *Phillips*, 415 F.3d at 1317 ("[W]hile extrinsic evidence can shed useful light on the relevant art, we have explained that it is less significant than the intrinsic record in determining the legally operative meaning of claim language." (internal quotation marks omitted)).

A. 35 U.S.C. § 112(6) (pre-AIA) / § 112(f) (AIA)[2]

Construing a patent claim that uses functional language invoking § 112(6) involves additional steps. However, § 112(6) does not apply to all functional claim language. Instead, there is a rebuttable presumption that § 112(6) applies when the claim language includes "means" or "step for" terms. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348. If such language does not appear in the claim language, then there is a rebuttable presumption that § 112(6) does not apply. *Id.* These presumptions rise or fall according to whether one of ordinary skill in the art would understand the relevant claim, in the context of the entire specification, to denote

[2] Because the applications resulting in the '527 Patent and the '268 Patent were filed before September 16, 2012, the effective date of the America Invents Act ("AIA"), the Court refers to the pre-AIA version of § 112.

sufficiently definite structure or acts for performing the function. *Id.* *See also Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015).

When §112(6) applies, it limits the scope of the functional term "to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof." *Williamson*, 792 F.3d at 1347. "The first step in construing such a limitation is a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). "[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id.* A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* The focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id.* The corresponding structure "must include all structure that actually performs the recited function." *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). However, § 112 does not permit "incorporation of structure from the written description beyond that necessary to perform the claimed function." *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

For § 112(6) limitations implemented by a programmed general purpose computer or microprocessor, the corresponding structure described in the patent specification must include an algorithm for performing the function. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). The corresponding structure is not a general purpose computer but rather

the special purpose computer programmed to perform the disclosed algorithm. *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008).

B. Definiteness Under 35 U.S.C. § 112(2) (pre-AIA) / § 112(b) (AIA)

"[I]ndefiniteness is a question of law and in effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012). The ultimate question is whether a claim, when viewed in light of the intrinsic evidence, "inform[s] those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). If it does not, then the claim is invalid as indefinite. 35 U.S.C. § 112(2). Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 2130.

III. CONSTRUCTION OF AGREED TERMS

The parties agreed to the construction of the following terms/phrases:

Claim Term/Phrase	Agreed Construction
"retrieving and presenting a list of assignments" ('900 Patent, claim 1)	Plain and ordinary meaning.
"transmitting the status information and the associated identity information to a server communicatively coupled to the computer system and configured to automatically notify a user of the status information, wherein at least one of the objects is automatically returned or picked up as a result of such notification" ('356 Patent, claims 1, 35)	Plain and ordinary meaning.
"tag" ('715 Patent, claims 1, 9, 11)	"any device or marking that identifies a product or process"
"to identify at least one problematic portion of the supply chain having a relatively high level of errors in reading tags"	Plain and ordinary meaning.

('715 Patent, claim 9)	
"activating an alarm" ('715 Patent, claim 22)	Plain and ordinary meaning.
"means for establishing a two-way communication channel between a server and at least one handheld device located at a field geographically distant from the server" ('581 Patent, claim 18)	This claim term is governed by 35 U.S.C § 112(6). **Function:** establishing a two-way communication channel between a server and at least one handheld device located at a field geographically distant from the server **Structure:** wireless modem, cellular wireless transmitters, including GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters
"means for determining a geographic location of the at least one handheld device" ('581 Patent, claim 18)	This claim term is governed by 35 U.S.C § 112(6). **Function:** determining a geographic location of the at least one handheld device. **Structure:** Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software.
"plurality" ('586 Patent, claims 7, 16)	"two or more"

Docket No. 116-1 at 2, 5-7, 11-12, 15-16, 18, and 25. In view of the parties' agreement on the construction of the identified terms, the Court **ADOPTS** the parties' agreed constructions.

Before the claim construction hearing, the parties agreed that the following term does not require construction:

Claim Term/Phrase	Agreed Construction
"work order assignment data" ('900 Patent, claim 1)	Plain and ordinary meaning.

In view of the parties' agreement on the construction of the identified term, the Court **ADOPTS** the parties' agreed construction.

IV. CONSTRUCTION OF DISPUTED TERMS

The Parties' dispute the meaning and scope of forty-two terms/phrases in the Asserted Patents. Each dispute is addressed below.

A. "mobile field unit" (term 1) and "a system having an enterprise computing system and at least one mobile field unit" (term 2)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"mobile field unit"	"computing device that communicates over a wireless network"	"a mobile device in which all graphical user interfaces are built using HTML; no proprietary code is used to present data"
"a system having an enterprise computing system and at least one mobile field unit"	Plain and ordinary meaning *See* IV's proposed construction for "mobile field unit"	"a system having an enterprise computing system and at least one mobile field unit, where all graphical user interfaces on the mobile device are built using HTML generated dynamically by a CGI or stored procedures at the enterprise computing system and communication between the enterprise computing system and mobile field unit uses non- proprietary technology"

1. The Parties' Positions

The Parties dispute: (i) whether the communication of the mobile field unit should be limited to a wireless network as Plaintiff proposes and (ii) whether the mobile field unit is limited

to "in which all graphical user interfaces are built using HTML; no proprietary code is used to present data" as Defendants propose.

(i) Wireless Network Limitation

Plaintiff argues that "mobile field unit" should be construed to mean a "computing device that communicates over a wireless network." (Dkt. No. 91 at 9) (citing '900 Patent at Abstract, 2:32–34). Specifically, Plaintiff contends that the specification teaches that wireless communication between a mobile field unit and an enterprise computing system is critical to the invention. (Dkt. No. 91 at 9) (citing '900 Patent at Abstract, 2:24–27, 14:45–50, 4:13–16, 5:1–10, 1:18–2:17, Figures 1, 2, 4, 17).

Defendants respond that Plaintiff's proposed "wireless network" requirement improperly reads in a limitation from the specification. (Dkt. No. 102 at 12.) Defendants also contend that Plaintiff cannot point to language defining "wireless" as being part of the invention. *Id.* (citing '900 Patent at 4:14–34).

Plaintiff replies that the abstract, summary of the invention, and every single example in the '900 Patent explain that the mobile field unit communicates over a wireless network. (Dkt. No. 106 at 6). According to Plaintiff, there is no example or suggestion anywhere in the specification that the wireless network is optional. *Id.*

(ii) HTML/Proprietary Code

Plaintiff argues that Defendants' construction improperly imports HTML and "proprietary code" limitations from embodiments in the specification into the claims. According to Plaintiff, the specification demonstrates that the invention is not limited to those embodiments and the plain language of claim 1 does not preclude the use of proprietary code. (Dkt. No. 91 at 9). Plaintiff also argues that Defendants' proposal violates the doctrine of claim differentiation by improperly incorporating an HTML limitation from dependent claims 2-27 into independent claim 1. *Id.* at

10. Regarding the phrase "a system having an enterprise computing system and at least one mobile field unit," Plaintiff notes that the first 14 words of Defendants' construction is identical to the 14 words of the claim term. *Id.* Plaintiff argues that Defendants then add 40 more words that improperly import embodiments and dependent claim limitations. *Id.*

Defendants respond that the specification limits "the present invention" to a system that uses an HTML graphical user interface and nonproprietary code. (Dkt. No. 102 at 11). Defendants also argue that the patent itself disparages prior art systems using proprietary code. *Id.* (citing '900 Patent at 1:66–2:17). According to Defendants, the specification then it explains that the "present invention" uses HTML graphical user interfaces and nonproprietary code. (Dkt. No. 102 at 11–12) (citing '900 Patent at 14:24–44). Defendants also contend that the specification does not disclose any implementation using proprietary code, except in criticizing the use of proprietary code. (Dkt. No. 102 at 12). Defendants also argue that their construction does not render claim 1 redundant of any dependent claim because each dependent claim is still narrower than the independent claim and thus claim differentiation does not apply. *Id.* at 13.

Plaintiff replies that the specification merely recommends that a new system should use "non-proprietary technologies." *Id.* (citing '900 Patent at 2:5–7, 2:16–17). Plaintiff also argues that the specification never equates HTML or nonproprietary code as being part of "the invention." (Dkt. No. 106 at 7) (citing '900 Patent at 2:45–3:30). Plaintiff further argues that nothing Defendants cite disclaims the use of non-HTML or proprietary code. (Dkt. No. 106 at 7). Finally, Plaintiff contends that the dependent claims' recitation of HTML further evidences that the inventors knew how to claim HTML and chose not to do so in some claims. *Id.*

2. Analysis

The intrinsic evidence indicates that the term "mobile field unit" should be limited as both

parties propose.

Regarding the issue of whether the mobile field unit communicates over a wireless network, the Court finds that it does. The specification states that "the system" includes a wireless communication network. For example, the Summary of the Invention states "[t]he system comprises an enterprise computing system, a mobile field unit, and *wireless communication network* which supports terminal control protocol/internet protocol (TCP/IP)." '900 Patent at 2:24–27 (emphasis added). *See also id.* at Abstract ("A system for multi-crew management comprises an enterprise computing system, a mobile field unit, and *wireless communication network* which supports terminal control protocol/internet protocol (TCP/IP) (emphasis added); *id.* at 14:48–50 ("The system comprises an enterprise computing system, *a wireless network*, and a mobile field unit" (emphasis added)). Furthermore, all of the figures illustrate "the system" with a wireless communication network between the mobile field unit and the enterprise computing system. *See, e.g.*, '900 Patent at 3:50–54 ("FIG. 1 graphically depicts a system in accordance with the invention. As shown, the inventive system comprises enterprise computing system 50, mobile field unit 52, and wireless communication network 54 operably connecting the two"). The specification further states that the mobile field unit itself "comprises a computing device and modem for communicating over the wireless network to the enterprise computing system." *Id.* at 2:32–34; *see also, id.* at Abstract ("*A mobile field unit comprises* a computing device and modem for communicating over the *wireless network* to the enterprise computing system.") (emphasis added).

The need for a wireless network is also consistent with the stated goal of facilitating advanced two-way data communication for geographically dispersed employees. *Id.* at 1:18–2:17. As one example, the specification states that "[a] work order, . . . [is] assigned using a centralized

enterprise computing system and are *communicated over a wireless network to field personnel* having mobile computing units." *Id.* at 3:37–42 (emphasis added). *See also id.* at 3:34–38 ("The present invention provides a multi-crew management system. More particularly the management system is an automated system for the distribution of work orders and related materials *to field personnel dispersed over a wide geographic area*.") (emphasis added).

While Defendants correctly argue that the PTAB recently recognized that the specification describes the wireless modem as optional, (Dkt. No. 102 at 13; Dkt. No. 102-1 at 8-10), the Court does not find this interpretation, under the broadest reasonable interpretation standard, to be persuasive. Ultimately, a person of ordinary skill in the art would understand that the specification makes clear that the mobile field unit must communicate over the wireless network. Accordingly, the Court construes "mobile field device" as a computing device that communicates over a wireless network.

Regarding the second issue related to proprietary code and HTML interfaces, the Court adopts Defendants' construction. The patent itself specifically criticizes the prior art's use of proprietary systems as being difficult to maintain. The specification then emphasizes the need for an easy-to-maintain non-proprietary system and explains that the "present invention" uses HTML graphical user interfaces and nonproprietary code to fulfill this need:

> [T]here are numerous advantages to the systems and methods *in accordance with the present invention. Foremost of these is that propriety [sic] code does not need to be developed and deployed on mobile field unit 52*. For example, code for displaying information in a window or in [a] dialog box is not proprietary. Rather, *all graphical user interfaces are built using HTML generated dynamically by a CGI or stored procedures at enterprise computing system 50*. Thus, there is no need to write complex closed proprietary code for each mobile field unit 52 when an interface is changed or different data needs to be presented.

Id. at 14:24–34 (emphasis added). The specification also explains that the enterprise computing system generates and sends the HTML interfaces to the mobile field unit, making maintenance

simpler:

> Furthermore, *in a system in accordance with the present invention application programs 80 [at the enterprise computing system] generate dynamic HTML based on data and the desired presentation . . . . These dynamically created HTML files are thereafter delivered to the mobile field unit.* Thus, changes made at enterprise computing system 50 are reflected immediately at mobile field unit 52. This greatly facilitates deployment of new user interfaces and applications to large numbers of field units 52.

Id. at 14:35–44 (emphasis added). Accordingly, the Court finds that the patentees limited the claimed invention by criticizing the prior art's use of proprietary displays and repeating that systems and methods that are "in accordance with the present invention" are limited to HTML. *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1344 (Fed. Cir. 2001) ("[Plaintiff's] argument, however, flies in the face of the many statements in the written description that define 'the invention' as employing a [specific] structure and distinguish the prior art in part on the ground that it used a [specific] structure, which had [a certain] disadvantage . . . .").

The Court is also not persuaded that this construction violates the doctrine of claim differentiation because the dependent claim that reference HTML recite specific steps that are taken *using* HTML. In other words, each dependent claim is narrower than the independent claim and thus claim differentiation does not apply. *Sinorgchem Co., Shandong v. Int'l Trade Comm'n*, 511 F.3d 1132, 1140 (Fed. Cir. 2007) ("Because claim 41 refers merely to a subset of the solvent systems described in claim 30, and is significantly narrower in scope, the claims are not rendered identical and present no claim differentiation problem."). Moreover, claim differentiation "does not override clear statements of scope in the specification . . . ." *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1302 (Fed. Cir. 1999) (citations omitted). For the reasons discussed above, the Court finds that the specification limits the invention to HTML.

Regarding the phrase "a system having an enterprise computing system and at least one

mobile field unit," the Court finds that the first 14 words of Defendants' construction are identical to the first 14 words of the claim term. The Court notes that the additional 40 words added to the phrase effectively repeat the limitations introduced with Defendants' construction for "mobile field unit." As discussed above, the Court will provide a construction for the term "mobile field unit," which will resolve the parties' claim construction dispute for that term. Accordingly, the phrase "a system having an enterprise computing system and at least one mobile field unit" will be given its plain and ordinary meaning.

3. Court's Construction

For the reasons set forth above, the Court construes the term **"mobile field unit"** to mean **"computing device that communicates over a wireless network without using proprietary code to present data, in which all graphical user interfaces are built using HTML."** The phrase **"a system having an enterprise computing system and at least one mobile field unit"** will be given its **plain and ordinary meaning.**

B. "field crew" (term 3)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"field crew"	"one or more field personnel"	"a group of people in the field"

1. The Parties' Positions

The term "field crew" appears in asserted claim 1 of the '900 Patent. The central dispute over this term is whether a "crew" requires two or more people.

Plaintiff contends that nothing in the intrinsic record suggests that the patentee intended to exclude a field crew of one. (Dkt. No. 91 at 10). Plaintiff argues that every step of the claims can be performed by a one-person field crew. *Id.* Indeed, Plaintiff argues that it is illogical and inconsistent with the specification to assume that multiple field crew members must carry out some of the steps, like inputting or selecting something on a mobile field unit. *Id.* (citing '900 Patent at

9:31–33, 9:66–10:2, 10:28–32). Plaintiff also contends that its construction is consistent with extrinsic evidence. *Id.* at 11.

Defendants respond that the specification uses "field crew" consistently with its plain meaning of a group of people. (Dkt. No. 102 at 14) (citing Dkt. Nos. 102-2, 102-3, 102-4, 102-5). Defendants also contend that the claims and specification distinguish the plural "crew" from a singular "crew member." (Dkt. No. 102 at 14) (citing Dkt. No. 102-6). Defendants argue that limiting "crew" to the plural is also consistent with the patent's primary purpose, which is for use with organizations having multiple-member crews. (Dkt. No. 102 at 14) (citing '900 Patent at 1:18–36, 14:65–15:5). Defendants further argue that obtaining information from and sending information to all members of the crew is both logical and expressly disclosed in the specification. *Id.* (citing '900 Patent at 9:4–19). Defendants also contend that the patent consistently uses "personnel" as plural, and thus the use of the term supports their construction. (Dkt. No. 102 at 15) (citing '900 Patent at 1:27, 1:42, 2:13, 1:61, 8:56).

Plaintiff replies that "[s]imply because a claim uses a term in a singular or plural form does not necessarily mean that the claim should be construed literally based on those singular or plural forms." (Dkt. No. 106 at 8) (citing *Lodsys, LLC v. Brother Int'l Corp.*, No. 2:11-00090, 2013 WL 2949959, at *17 (E.D. Tex. June 14, 2013)). Plaintiff further argues that the patent uses "field crew" and "field crew member" to distinguish when one member is required ("field crew member"), from when one or more members may be involved ("field crew"). *Id.*

Defendants respond that no evidence supports Plaintiff's conclusion that a "crew" can consist of just one member. (Dkt. No. 119 at 7). According to Defendants, the '900 Patent and every dictionary definition of record support their position that "crew" is plural. *Id.* Defendants argue that the patent uniformly describes "crew" (and "personnel") as plural and contrasts it with

the singular "crew member." *Id.*

2. Analysis

The '900 Patent uses "field crew" to refer to either a single person or a group of people. For example, claim 1 recites steps performed "in response to field crew input selecting an assignment" and "in response to field crew input." '900 Patent, claim 1. However, nothing in this claim language or the specification suggests that multiple people in the field do the inputting or selecting. *Id.* Indeed, claim 1 does not recite any step that must be carried out by more than one person–a single person could input login data, select an assignment, view a display, and input an action taken. *Id.* Instead, the focus of the invention is on identifying a particular field crew and assigning that field crew a mobile field unit, regardless of the number of members in a particular field crew. *See, e.g.*, '900 Patent at 4:35–39 ("*Each field crew is assigned a mobile field unit 52*. Thus, although only one is shown in FIG. 1, numerous mobile field units 52 may be deployed and operating at once. As noted, each mobile field unit 52 has an IP address assigned to it." (emphasis added)), 6:64–67 ("Generally, an operator at enterprise computing system 50 employs application program 80 *to assign a work order or task to a particular field crew*." (emphasis added)); 8:66–9:2 ("FIG. 5 provides a flow chart depiction of a scenario for using the system of FIGS. 1 through 5 to distribute work order assignment data to a field crew having a mobile field unit.").

Additionally, the fact that the '900 Patent requires a single person, *i.e.* a single field crew member, to perform some steps in some of the claims does not suggest, as Defendants argue, that the use of "field crew" embraces only two or more people. The use of "field crew" vs. "field crew member" imposes different requirements (at least one vs. only one). Likewise, although the specification sometimes refers to field crew "personnel" performing a step, *id.* at 8:56–57 ("[W]hen field crew personnel click . . ."), it does so while speaking generally about how numerous crews might interact with the system described in the patent. *See, e.g., id.* at 3:34–38

("More particularly the management system is an automated system for the distribution of work orders and related materials to field personnel dispersed over a wide geographic area."); *id.* at 7:17–18 ("Typically, work orders are assigned by personnel at enterprise computing system 50 using application program 80."); *id.* at 14:45–48 ("Thus, as described above the present invention provides systems and methods for low-cost, timely, two-way communications between a central enterprise systems and geographically distributed field personnel.").

Ultimately, there is nothing in the claim language or the intrinsic record that requires a field crew to include two or more people and the Court declines Defendants' invitation to import such a limitation by elevating their preferred dictionary definitions over the language of the claims. *See Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1377 (Fed. Cir. 2014) ("[W]e have cautioned against relying on dictionary definitions at the expense of a fair reading of the claims, which must be understood in light of the specification."); *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) ("We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history.").[3]

3. Court's Construction

Accordingly, the Court construes the term **"field crew"** to mean **"one or more personnel assigned to a particular mobile field unit."**

[3] Defendants' IPR expert, Dr. Tal Lavian, agreed that under the broadest reasonable interpretation standard a "field crew" can be a single person. Plaintiff's Claim Construction Presentation at 14. According to Dr. Lavian, a field crew can be one, two, five, or any number of people. Plaintiff's Claim Construction Presentation at 14.

C. "in response to the input of field crew login data" (term 5)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"in response to the input of field crew login data"	Plain and ordinary meaning	"in response to the input of login data corresponding to and entered by the group of people in the field"

1. The Parties' Positions

The parties dispute whether the phrase "in response to the input of field crew login data" requires construction. Plaintiff contends that Defendants' construction suggests that claim 1 requires a group of people to enter login data on a mobile field unit. (Dkt. No. 91 at 27). Plaintiff further argues that such a construction, as compared to the plain and ordinary meaning, is illogical, confusing, and not supported by the intrinsic record. *Id.* at 28.

Defendants respond that the plain meaning of "field crew login data" requires that the data be entered by and correspond to the field crew (i.e., the group of people in the field). (Dkt. No. 102 at 16). Defendants also argue that the specification explains that the field crew, not just a field crew member, enters the login data. *Id.* (citing '900 Patent at 9:5–8, Figure 7). Defendants further argue that the corresponding description for Figure 7 discloses a "field crew member clicking a link" to bring up the login page, but then describes "the field crew entering login data." (Dkt. No. 102 at 16) (citing '900 Patent at 9:32–33, 9:40). According to Defendants, the specification is consistent that multiple members enter login data. (Dkt. No. 102 at 16). Defendants also argue that the claim and specification also clarify that the data corresponds to the entire crew, because both require that the field crew's identity is verified. *Id.* (citing '900 Patent at 9:5–8, 9:39–43). Defendants contend that it makes sense to require all crew members to log in. (Dkt. No. 102 at 16).

Plaintiff replies that Defendants' construction requires multiple people to type on the mobile field unit to input a single field crew login. (Dkt. No. 106 at 8). According to Plaintiff, the

patent never suggests that result. *Id.*

Defendants reply that the claim requires the "input of field crew login data." (Dkt. No. 119 at 7). Defendants contend that the specification discloses "login data input by the field crew" and "the field crew entering login data." *Id.* at 8 (citing '900 Patent at 9:6, 9:40). According to Defendants, it makes sense to verify the identity of the crew instead of one member. (Dkt. No. 119 at 8).

2. Analysis

The phrase "in response to the input of field crew login data" appears in asserted claim 1 of the '900 Patent. As with the previous term, Defendants contend that the phrase requires the crew (*i.e.*, multiple members) to each enter login data. (Dkt. No. 102 at 16). According to Defendants, the claim and specification also clarify that the data corresponds to the entire crew, because both require that the field crew's identity to be verified, and not the identity of a single member. *Id.* The Court disagrees and finds that Defendants' attempt to redraft the claim to require every member of the crew login to be verified is inconsistent with the intrinsic evidence.

The specification indicates that "[a]t step 330 in response to *a field crew member* clicking on a link in the 'alert HTML file,' a login form is displayed." '900 Patent at 9:31–33 (emphasis added). Likewise, Step 330 of Figure 7 states "[a]t the mobile field unit, upon *a user* clicking on a link in the alert HTM file, presenting a login form." *Id.* at Figure 7 (emphasis added). Thus, the intrinsic evidence indicates that only one user, and not the entire field crew, needs to input login data. Accordingly, the Court rejects Defendants' construction because the disputed phrase is unambiguous and is easily understandable by a jury, particularly in light of the Court's construction of "field crew." Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties and given it its proper weight in light of the intrinsic

evidence.

3. Court's Construction

The phrase **"in response to the input of field crew login data"** will be given its **plain and ordinary meaning.**

D. "verifying field crew identity" (term 6)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"verifying field crew identity"	Plain and ordinary meaning	"verifying, by the enterprise computing system, the identity of the group of people in the field"

1. The Parties' Positions

The parties dispute whether the phrase "verifying field crew identity" requires construction. According to Plaintiff, Defendants' construction is inconsistent with dependent claim 3, which recites three sub-steps for "verifying field crew identity," two of which occur at the mobile field unit and not at the enterprise computing system. (Dkt. No. 91 at 28) (citing '900 Patent at 15:39–49). Plaintiff argues that "verifying" in independent claim 1 cannot be limited to being performed "by the enterprise computing system." (Dkt. No. 91 at 28). Plaintiff further argues that Defendants' construction improperly imports a limitation from embodiments into claim 1. *Id.* (citing '900 Patent at 9:30–43, Figure 7).

Defendants respond that claim 3 supports requiring the enterprise computing system to perform the verifying. (Dkt. No. 102 at 17). Defendants argue that the third step of claim 3 requires the enterprise computing system verify the login data. *Id.* According to Defendants, the specification supports their construction because it exclusively describes the enterprise computing system as verifying the field crew's identity. *Id.* (citing '900 Patent at 9:30–43, Figure 7). Defendants argue that the specification does not describe the mobile field unit as having the capability to verify the login data. (Dkt. No. 102 at 17).

Plaintiff replies that Defendants do not identify any language in the specification disclaiming "verifying" being performed on the mobile field unit. (Dkt. No. 106 at 9). According to Plaintiff, claim 3 explicitly says that all three of the steps (including those performed on the mobile field unit) are part of "verifying field crew identity." *Id.* (citing '900 Patent at 15:38–40).

2. Analysis

The phrase "verifying field crew identity" appears in asserted claim 1 of the '900 Patent. The Court finds that the specification describes the enterprise computing system as verifying the field crew's identity. The specification states that "[a]t step 332 in response to the field crew entering login data into the login form and submitting the login data, the login data is transmitted to enterprise computing system 50. At step 334 database 82 is queried to verify that the login data is correct." '900 Patent at 9:39–43. Similar to the term "mobile field unit," the specification describes important aspects of "the system." For the "mobile field unit" it was a wireless network, and for this phrase it is the enterprise computing system performing the verification. Accordingly, the Court will include "by the enterprise computing system" in its construction. The Court rejects the remaining portion of Defendants' construction. As discussed above, the Court will provide a construction for the term "field crew," which will resolve the parties' claim construction dispute for that term.

Plaintiff argues that Defendants' construction is inconsistent with dependent claim 3, which recites three sub-steps for "verifying field crew identity." The Court disagrees. Although claim 3 includes two precursor steps where the mobile field unit receives and transmits data, the third step requires the enterprise computing system verify the login data. Accordingly, claim 3 is consistent with Defendants' construction. Moreover, the specification does not describe the mobile field unit (or any other component) as verifying the login data.

3. Court's Construction

The Court construes the phrase **"verifying field crew identity"** to mean **"verifying, by the enterprise computing system, the identity of the field crew."**

E. "retrieving detailed assignment data" (term 8)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"retrieving detailed assignment data"	Plain and ordinary meaning	"retrieving, from the enterprise computing system, detailed data regarding the assignment that the field crew is working on"

1. The Parties' Positions

The parties dispute whether the phrase "retrieving detailed assignment data" requires construction. Plaintiff contends that nothing in the patent demands that "retrieving" must be "from the enterprise computing system." (Dkt. No. 91 at 28). Plaintiff further argues that dependent claim 13 further limits "retrieving detailed assignment data" to four sub-steps, one of which occurs at the mobile field unit and not at the enterprise computing system. *Id.* at 28-29 (citing '900 Patent at 16:42–55). According to Plaintiff, "retrieving" must therefore include retrieval from the mobile field unit *and* the enterprise computing system. (Dkt. No. 91 at 29). Plaintiff also argues that defining "assignment data" as "data regarding the assignment that the field crew is working on" is inconsistent with claim 1 because the method may be performed before anyone begins "working on" the assignment. *Id.*

Defendants respond that Plaintiff's argument that "nothing in the patent" requires retrieving detailed assignment data "from the enterprise computing system" directly contradicts statements it made to the PTAB. (Dkt. No. 102 at 17) (citing Dkt. No. 102-7 at 23). Defendants also argue that claim 13 does not require a different conclusion simply because the request step in claim 13 (a precursor to retrieving) comes from the mobile field unit. (Dkt. No. 102 at 17). Defendants further argue that claim 13 is consistent with their construction because it recites

additional details of how the data is retrieved from the enterprise computing system and transmitted to the mobile field unit. *Id.* Defendants also contend that the specification consistently describes the detailed assignment data as being retrieved from the database on the enterprise computing system and/or transmitted to the mobile field unit from the enterprise computing system. *Id.* at 17-18 (citing '900 Patent at 9:11–14, 10:26–67, 11:10–14, 11:25–29). Defendants further argue that the specification expressly defines "'detailed assignment data' . . . [as] detailed data regarding the assignment that a field crew may be working on." (Dkt. No. 102 at 18) (citing '900 Patent at 11:31–33).

Plaintiff replies that Defendants identify no language disclaiming a location of the assignment data before it is retrieved. (Dkt. No. 106 at 9). Plaintiff further argues that it did not disclaim retrieval from the mobile field unit during the IPR. (Dkt. No. 106 at 9). According to Plaintiff, it explained that "retrieving" required the data to be retrieved from somewhere (such as the enterprise computing system or local memory), but could not be generated in real time (and thus "retrieved" from nowhere), as in the prior art. *Id.* (citing Dkt. No. 102-7 at 22-23). Plaintiff further argues that the "'detailed assignment data' . . . is detailed data regarding the assignment that a field crew may be working on." (Dkt. No. 106 at 9) (citing '900 Patent at 11:31–33). According to Plaintiff, the field crew need not be working on the assignment before it is retrieved. (Dkt. No. 106 at 9).

2. Analysis

The phrase "retrieving detailed assignment data" appears in asserted claim 1 of the '900 Patent. The Court finds that "retrieving detailed assignment data" requires retrieving data from the enterprise computing system. The specification consistently describes the detailed assignment data as being retrieved from the database on the enterprise computing system and/or transmitted to the

mobile field unit from the enterprise computing system. *See, e.g.*, '900 Patent at 9:11–14 ("At step 310 in response to input by the field crew selecting an assignment from the list of assignments, detailed assignment data for the selected assignment is *retrieved from database 82*.") (emphasis added); 10:28–32 ("As shown, at step 360 at the mobile field unit 52 in response to a crew member clicking on an 'assignment link' in the assignment HTML page, a request for data related to the selected assignment is *transmitted to enterprise computing system 50.*") (emphasis added); 11:10–14 ("The items listed in the cause or equipment categories are derived by querying database 82 *on enterprise computing system 52.*") (emphasis added); 11:25–26 ("At step 366 the 'detailed assignment data HTML page' is transmitted to mobile field unit 52."). In addition to the specification, Plaintiff also argued that this limitation was required before the PTAB. (Dkt. No. 102-7 at 23) ("Retrieving [the detailed assignment] data, such as from the enterprise computing system, *as the '900 patent claim 1 requires . . . .*") (emphasis added). *See also Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1361 (Fed. Cir. 2017) (recognizing that statements made in the context of *inter partes* review proceedings may be relevant in construing a patent's claims). Accordingly, the Court will include "from the enterprise computing system" in the construction.

According to Plaintiff, "retrieving" must permit retrieval from the mobile field unit and the enterprise computing system. (Dkt. No. 91 at 29). The Court disagrees. Claim 13 recites additional details (steps 2-4) of how the data is retrieved from the enterprise computing system and transmitted to the mobile field unit. The request step in claim 13 (a precursor to retrieving) comes from the mobile field unit. Accordingly, the Court finds that the data is retrieved from the enterprise computing system.

However, the Court rejects the remaining portion of Defendants' construction. The intrinsic evidence does not require the field crew to be actively "working on" the assignment to

satisfy the retrieving step. The claim language itself only requires retrieving detailed assignment data. It is the next step in the claim that displays the detailed assignment data to the field crew. Moreover, the specification indicates that "detailed assignment data" is "detailed data regarding the assignment that a field crew *may* be working on." '900 Patent at 11:31–33 (emphasis added). There is nothing in the intrinsic evidence that requires the field crew to be actively working on the assignment. Indeed, Defendants agreed during the claim construction hearing to change "is working on" to "may be working on."

3. Court's Construction

The Court construes the phrase **"retrieving detailed assignment data"** to mean **"retrieving, from the enterprise computing system, detailed data regarding the assignment."**

F. "obtaining identity information regarding an entity which enters a controlled space" (term 9)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"obtaining identity information regarding an entity which enters a controlled space"	IV proposes the following constructions for the following terms: "entity": "an individual, an automated device, or a robot" "controlled space": "a space in which access to, from, or within is controlled or monitored" The remainder of the language should be given its plain and ordinary meaning.	"entity": "a person or robot" "controlled space": "a storage location having a mechanism limiting unauthorized access to the storage location" The remainder of the language should be construed: "receiving information, from an entity, identifying the entity upon entry into a controlled space"

1. The Parties' Positions

The parties dispute whether the recited "entity" includes "an automated device." The parties also dispute whether the "controlled space" must include a "mechanism." Regarding the

term "entity," Plaintiff argues that the specification explicitly includes "automated device" within the definition for "entity." (Dkt. No. 91 at 11) (citing '356 Patent at 1:66–2:4, 2:64–67). Plaintiff contends that Defendants' construction improperly excludes the full scope of the invention and attempts to limit "entity" to descriptions of certain embodiments. (Dkt. No. 91 at 12) (citing '356 Patent at 3:7–12, 4:34–36, 4:67–5:4).

Defendants respond that the patent uniformly describes embodiments in the context of an entity that is either a person or apparatus designed to function in place of a person. (Dkt. No. 102 at 18). Defendants argue that the patent describes no "automated device" functioning as an entity of broader scope than that of a "robot." *Id.* Defendants contend that the Detailed Description repeatedly establishes an "entity (i.e., a person or robot)" or "entity (i.e., human or robot)." *Id.* (citing '356 Patent at 3:9, 4:35, 5:1). Defendants further argue that Plaintiff's construction would likely confuse a jury, because it suggests the "automated device" is something separate from a robot. (Dkt. No. 102 at 19).

Plaintiff replies that an "entity" is not required to act like a human. (Dkt. No. 106 at 9). According to Plaintiff, the entity may be passive and not responsible for actually moving an object. *Id.* (citing '356 Patent at 2:64–67). Plaintiff also argues that some claims require the entity to use an input device (*e.g.*, claims 20, 33, 51), and others do not (*e.g.*, claims 1, 35). (Dkt. No. 106 at 10). Plaintiff further contends that the patent's use of the phrase "entity (i.e., human or robot)" does not alter the meaning of "entity," because the phrase only is used in the context of embodiments in which entities do act like humans. *Id.*

Regarding the term "controlled space," Plaintiff argues that one of the goals of the '356 Patent is to provide "a system and method for monitoring the existence, location, and movement of objects in inventory as well as providing secure and traceable access to them." (Dkt. No. 91 at

12) (citing ’356 Patent at 1:14–18, Abstract). Plaintiff contends that the patent contemplates embodiments that do not limit access, and instead, permit access and then monitor such access. (Dkt. No. 91 at 12) (citing ’356 Patent at 2:21–34, 3:30–31, 5:19–21, 5:57–62.). Plaintiff further argues that Defendants’ construction introduces unnecessary confusion by including words such as “mechanism” and “limiting.” (Dkt. No. 91 at 12). Plaintiff contends that some embodiments use “mechanisms” to limit access to the space, but the patent also contemplates other means of controlling or monitoring access. *Id.* (citing ’356 Patent at 5:18–20). Plaintiff also argues that Defendants’ inclusion of “limiting unauthorized access” is inconsistent with embodiments that allow unauthorized access. (Dkt. No. 91 at 12-13) (citing ’356 Patent at 2:4–6, 2:21–27, 5:57–58).

Defendants argue that the term “controlled space” is synonymous with “controlled-access space.” (Dkt. No. 102 at 19). Defendants further contend that the premise on which the patent bases its purported novelty depends on a storage location having both a means of limiting access to the space, and a means for monitoring the space. *Id.* (citing ’356 Patent at 1:46–55). Defendants also contend that Plaintiff recently argued this position to the PTAB. (Dkt. No. 102 at 19) (citing Dkt. No. 102-9 at 25). According to Defendants, the patent uniformly describes embodiments throughout the specification that monitor spaces secured by a mechanism limiting physical access. (Dkt. No. 102 at 19-20) (citing ’356 Patent at Abstract, 1:29–55, 2:7–21, 2:42–57, 3:7–29, 3:42–5:62, 8:16–23).

Defendants also argue that Plaintiff’s construction should be rejected because it reads out “controlled” from the claims entirely. (Dkt. No. 102 at 20). Defendants contend that Plaintiff’s construction repeats words of the phrase construed (*i.e.*, “controlled” and “space”) or word/phrases recited by other elements of the claim (*i.e.*, “monitoring . . . to/from/within”). *Id.* Defendants further argue that Plaintiff’s construction makes no sense because “access from a space” and

"access within a space" cannot be controlled or monitored. *Id.* According to Defendants, the patent provides no written description support for a space that is a "controlled space" merely because access to it is monitored. *Id.*

Plaintiff replies that the first paragraph of the invention summary describes monitoring (*e.g.*, recording and reporting) "unauthorized accesses to a controlled space," and does not mention a locking mechanism or other method of "controlling" the access to the claimed controlled space. (Dkt. No. 106 at 10) (citing '356 Patent at 2:4-6). Plaintiff also argues that Defendants' construction is inconsistent with the doctrine of claim differentiation. (Dkt. No. 106 at 10) (citing '356 Patent at Claim 2). Plaintiff further argues that its IPR response is consistent with its position that the invention is about monitoring access to a space, not locking it down. (Dkt. No. 106 at 11) (citing Dkt. No. 102-9 at 25).

Defendants reply that they do not propose that "controlled space" be limited to "locking mechanisms," but instead that a controlled space must have "a mechanism limiting unauthorized access." (Dkt. No. 119 at 8) (citing '356 Patent at 5:18–31). According to Defendants, claim differentiation does not apply because their construction does not make claim 1 redundant of claim 2. (Dkt. No. 119 at 8). Defendants also argue that claim differentiation argument would improperly broaden the meaning of "controlled space" beyond the specification. *Id.* Defendants argue that the patent's purported novelty rests on a storage location having both a means of limiting access to the space, and a means for monitoring the space. (Dkt. No. 119 at 9) (citing '356 Patent at Abstract, 1:49–55, 2:7–21, 2:42–57, 3:7–35, 3:42–5:62, 8:16–23). Defendants further argue that their construction recognizes that "controlled space" reflects the limitation on access to the space, while the "monitoring" element of claim 1 recites the monitoring of that space. (Dkt. No. 119 at 9).

2. Analysis

The phrase "obtaining identity information regarding an entity which enters a controlled space" appears in asserted claims 1, 35, and 51 of the '356 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. Regarding the term "entity," the Court finds that it should be construed to mean "an individual, an automated device, or a robot." The first sentence of the Summary of the Invention states that "[t]he present invention provides a system and method for determining the identity of an entity, *(e.g., an individual or an automated device)* which entered a confined space and automatically associating, using a computer system, the identity with the removal or addition of objects in the confined space." '356 Patent at 1:66-2:4 (emphasis added). This is consistent with the patent's description of the invention. *Id.* at 2:64–67 ("A system and method for associating the movement of goods with the identity of an individual or other entity responsible for or connected with such movement is described below.").

Defendants argue that the '356 Patent describes no "automated device" functioning as an entity of broader scope than that of a "robot." (Dkt. No. 102 at 18). The Court generally agrees with Defendants, but the specification explicitly states that the entity may be an "automated device." Thus, the Court finds that the "entity" should be construed to include an "automated device." However, the Court rejects Plaintiff's argument that the "automated device" may include any "device" that is "connected" with the movement of goods. The claims require the "entity" to enter the controlled space, which requires more than a "passive" device that is "connected with" the movement of goods. Indeed, the specification describes a tracking system that "monitors *an entity that enters a controlled space* and the addition, removal, or other movement or status changes of objects in the controlled space." '356 Patent at Abstract (emphasis added); *see also, id.*

at 1:66–2:5 ("The present invention provides a system and method for determining the identity of *an entity (e.g., an individual or an automated device) which entered a confined space* and automatically associating, using a computer system, the identity with the removal or addition of objects in the confined space.") (emphasis added).

Regarding the term "controlled space," the Court finds that it should be construed as "a location configured to provide secure and traceable access to objects." The Background of the Invention section states that "*existing approaches may provide some secure means of access* such a locked door or cabinet using physical keys and/or a method for tracking and viewing inventory; *however, none couple both of these methods* such that a reliable system could know what and when a particular inventory item was removed by a particular person." '356 Patent at 1:49–55 (emphasis added). With this background, the specification states that "[t]he present invention relates generally to inventory control and, more particularly, to a system and method for monitoring the existence, location, and movement of objects in inventory *as well as providing secure and traceable access to them*." *Id.* at 1:11–18 (emphasis added).

The specification provides exemplary embodiments that monitor spaces secured by a mechanism limiting physical access. *Id.* at Abstract, 1:29–55, 2:7–21, 2:42–57, 3:7–29, 3:42–5:62, 8:16–23. The specification further states that "any or all of these access means (or any other of a variety of access means) may be used in combination." *Id.* at 5:18-20. Moreover, the patent summarizes the disclosure by stating that "a system for providing *controlled access to storage locations and coupling such access to the movement of goods into, out of, or within such locations* has been described," *Id.* at 8:16–23 (emphasis added). Accordingly, the Court construes "controlled space" to mean "a location configured to provide secure and traceable access to objects."

According to Plaintiff, a space that is only monitored would fall within the claim scope. (Dkt. No. 91 at 12). The Court disagrees. Such a construction reads "controlled" out of the claims. While monitoring may provide traceable access to objects, it does not control access to a space. However, the specification explicitly sets the invention apart from the prior art because the prior art lacked providing both a secure means of access and a method of monitoring. '356 Patent at 1:49–55 ("*[E]xisting approaches may provide some secure means of access* such a locked door or cabinet using physical keys and/or a method for tracking and viewing inventory; *however, none couple both of these methods* such that a reliable system could know what and when a particular inventory item was removed by a particular person.") (emphasis added). Plaintiff's construction would therefore improperly expand the scope of the claims to include monitoring a space without controlling access. To the extent that Plaintiff argues that "controlled space" is a proxy for "defined space," or only needs to be a "monitored space," the Court rejects that argument.

The Court rejects Defendants' construction because it introduces unnecessary confusion with the inclusion of the words "mechanism" and "limiting." While some embodiments use "mechanisms" to limit access to the space (*e.g.*, '356 Patent at 2:7–20 (describing "one embodiment" with a locking mechanism)), the patent also contemplates other means of controlling access. '356 Patent at 5:18–20 ("[A]ny or all of these access means (or any other of a variety of access means) may be used in combination."). Moreover, dependent claim 2 adds to claim 1 a "mechanism" to allow the entity to have access to the controlled space, provided the entity is authorized to do so. Thus, the Court is not convinced that "mechanism" should be included in the construction. Finally, the Court finds that the remainder of the claim language should be given its plain and ordinary meaning.

3. Court's Construction

The Court construes the term **"entity"** to mean **"an individual, an automated device, or a robot,"** and construes the term **"controlled space"** to mean **"a location configured to provide secure and traceable access to objects."** The remainder of the phrase will be given its **plain and ordinary meaning.**

G. "automatically associating . . . the identity information regarding the entity with status information regarding additions, removals, returns, defective status, or movements of the objects to/from/within the controlled space" (term 11)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"automatically associating . . . the identity information regarding the entity with status information regarding additions, removals, returns, defective status, or movements of the objects to/from/within the controlled space"	IV proposes the following constructions for the following terms: "automatically": "with little or no direct human control or will" "to/from/within": "to or from or within" See also IV's proposed constructions for "entity" and "controlled space" above The remainder of the language should be given its plain and ordinary meaning	"automatically": "without human intervention" "status information": "information regarding an event in inventory" "entity": "a person or robot" "controlled space": "a storage location having a mechanism limiting unauthorized access to the storage location" The remainder of the language should be construed: "automatically specifying a relationship, using the computer system, between the identity information regarding the entity with status information showing object additions, object removals, object returns, object defective statuses, or object movements to, from, and within the controlled space"

1. The Parties' Positions

The parties dispute whether "automatically" means without human intervention, as

Defendants propose. The parties also dispute whether the term "to/from/within" should be construed to mean "to or from or within," as Plaintiff proposes. Plaintiff contends that the '356 Patent uses "automatically" to mean "with little or no direct human control or will." (Dkt. No. 91 at 13) (citing '356 Patent at Abstract, 1:55–63, 2:1–4, 2:22–34, 3:12–14, 3:36–41, 4:33–35, 5:63–6:6, Figure 3). Plaintiff further contends that both parties' dictionary definitions for "automatic" support their construction. (Dkt. No. 91 at 13) (citing Dkt. Nos. 91-8, 91-9, 91-10, 91-11). According to Plaintiff, nothing in the specification suggests that all "automatic" actions must be performed entirely "without human intervention." (Dkt. No. 91 at 13) (citing '356 Patent at 2:22–34, 7:12–13). Plaintiff contends that every mention of "automatic" return, pick up, or replenishment in the claims is silent as to whom or what is responsible for those actions. (Dkt. No. 91 at 13). Plaintiff further argues that when the patentees intended to limit who or what performs a certain action "automatically," they specified the actor in the claims. *Id.* (citing '356 Patent at 8:25–43). Plaintiff also argues that the third time "automatically" appears in claim 1, it is silent as to who or what is responsible for "automatic" return or pick up. (Dkt. No. 91 at 14).

Defendants respond that the patent uses the term "automatically" consistent with its plain meaning to refer to actions taken without human intervention. (Dkt. No. 102 at 21) (citing Dkt. Nos. 102-10, 102-11, 102-12, 102-13). Defendants further argue that throughout the specification, the patent distinguishes between actions taken automatically and those taken by a user. (Dkt. No. 102 at 21) (citing '356 Patent at 1:19–63, 4:33–40). Defendants contend that because the patent discloses users taking certain actions in the alternative highlights that the use of the term "automatically" distinguishes those actions from actions performed by a user. (Dkt. No. 102 at 21). Defendants further contend that Plaintiff's argument that "automatically returned or picked up" allows for human intervention ignores that claim 1 nonetheless requires the return or pickup

happen "automatically." *Id.* at 21-22.

Plaintiff replies that the patent and its file history expressly contemplate "automatic" actions that have human involvement. (Dkt. No. 106 at 11). Plaintiff argues that the specification explains that in the example depicted in Figure 3, the "user may take steps" to perform step 330, which is "automatic replenishment." *Id.* (citing '356 Patent at Figure 3, 7:12–13, 3:20–29). Plaintiff also argues that the provisional application explains that a "party" may "automatically replenish (block 330) the objects in inventory." (Dkt. No. 106 at 11-12) (citing Dkt. No. 106-1 at 14). Plaintiff further contends that excluding any possibility of human involvement from all "automatic returns or pick-ups" would be inconsistent with how inventory control systems operated in November 2000. (Dkt. No. 106 at 12).

Defendants reply that Plaintiff mischaracterizes their proposal as "excluding any possibility of human involvement from all 'automatic returns or pickups'. . . ." (Dkt. No. 119 at 9). Defendants argue that they propose "automatically" means "without human intervention," consistent with the patent distinguishing between actions taken automatically and those taken by a user. *Id.*

Regarding the term "to/from/within," Plaintiff argues that the patent uses the term "to/from/within" to mean "to, from, or within." (Dkt. No. 91 at 14) (citing '356 Patent at 8:17–20, Claims 1, 35, 51). According to Plaintiff, the logical meaning of "/" is "or," rather than "and." (Dkt. No. 91 at 14). Plaintiff contends that "to/from/within" cannot mean "and," because "additions . . . from the controlled space" would render the claim nonsensical. *Id.*

Defendants respond that the patent uses the phrase "to/from/within" to qualify the claimed "status information" as reflecting activities taken with respect to objects to, from, and within the controlled space. (Dkt. No. 102 at 22). Defendants argue that the patent uses the phrase

"to/from/within" to require the status information reflect additions to, removals from, returns to, defective status within, and movements of objects within the controlled space. *Id.* ('356 Patent 2:2–4, 2:10–13, 3:12–14, 5:50–62, 6:45–50, Abstract). Defendants contend that Plaintiff's construction renders the claim nonsensical regardless of which grammatical conjunction ("and" versus "or") is used. (Dkt. No. 102 at 22). Defendants also argue that Plaintiff's proposal improperly renders other terms in the claim superfluous. *Id.*

Regarding the term "status information," Plaintiff argues that nothing about that claim language is unclear or demands clarification for the jury. (Dkt. No. 91 at 30; Dkt. No. 106 at 13). Defendants do not provide arguments for this term in their briefing.

2. Analysis

The phrase "automatically associating . . . the identity information regarding the entity with status information regarding additions, removals, returns, defective status, or movements of the objects to/from/within the controlled space" appears in asserted claims 1, 35, and 51 of the '356 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim.

Regarding the term "automatically," the intrinsic evidence indicates that "automatic" actions may have a decreased need for human input. In contrast to the examples specifying that a "computer" or a "server" must perform the automatic steps, the specification explains that in the example depicted in Figure 3, the "user may take steps" to perform step 330, which is "automatic replenishment." '356 Patent at Figure 3. The specification also states that "when objects in inventory are depleted or otherwise moved (see step 310), this information may be transmitted (step 320) from the server to a user or client computer system through network interfaces, wireless interfaces, or telephone interfaces such as those described in the embodiment illustrated by FIG.

1A." *Id.* at 7:6–11. The specification adds that "[u]pon receiving this information, *the user* may take steps to replenish (step 330) the objects in inventory." *Id.* at 7:12–13 (emphasis added). Accordingly, the Court rejects Defendants' construction because it would preclude the user from taking steps (*i.e.*, "without human intervention") to replenish the objects in inventory. As indicated, the disclosed system decreases the need for human input by automatically notifying a user when objects in inventory are depleted or otherwise moved. *See, e.g., CollegeNet, Inc. v. ApplyYourself, Inc.*, 418 F.3d 1225, 1236 (Fed. Cir 2005) ("The addition of 'automatically' to the claim language did not prohibit human interaction; it merely decreased the need for the user to insert information into a form.").

Regarding the term "to/from/within," the intrinsic evidence indicates that the term means "to, from, or within." In the context of the claim, a person of ordinary skill in the art would understand "/" to mean "or," rather than "and." For example, "to/from/within" modifies "additions . . . . to/from/within the controlled space" as well as "removals, returns, defective status, and movements." In this context, "to/from/within" cannot mean "and" because "additions . . . *from* the controlled space" would not make sense. Likewise, "removals . . . *to* the controlled space" would also be nonsensical. Instead, a person of ordinary skill would understand the phrase to mean "additions … *to* the controlled space," and "removals . . . *from* the controlled space." Finally, the specification confirms this understanding by stating "a system for providing controlled access to storage locations and coupling such access to *the movement of goods into, out of, or within such locations* has been described." '356 Patent at 8:16–23 (emphasis added).

Regarding the term "status information," Defendants propose a construction but do not provide any argument to support their construction in their briefing. The Court finds that nothing about this claim language is unclear or requires clarification for the jury. Accordingly, this term

and the remainder of the phrase will be given its plain and ordinary meaning. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

The Court construes the term **"automatically"** to mean **"with a decreased need for human input."** The Court also construes the term **"to/from/within"** to mean **"to, from, or within."** The term **"status information,"** and the remainder of the phrase will be given its **plain and ordinary meaning**, unless otherwise construed by the Court.

H. "notifying the user of whether or not the addition, removal, return, defective status, or movement of the objects is authorized or not" (term 13)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"notifying the user of whether or not the addition, removal, return, defective status, or movement of the objects is authorized or not"	Plain and ordinary meaning	"controlled space": "a storage location having a mechanism limiting unauthorized access to the storage location" The remainder of the language should be construed: "notifying the user with every notification whether or not the addition, removal, return, defective status, or movement of inventory items at the controlled space is authorized or not."

1. The Parties' Positions

The parties dispute whether dependent claim 4 requires "notifying the user with every notification," as Defendants propose. Plaintiff contends that there is no support in the claims or the specification for adding this requirement. (Dkt. No. 91 at 29). Plaintiff argues that it appears that Defendants want to add a requirement to claims 1, 35, and 51 that a user is continuously notified of all additions, removals, returns, defective status, and movement of objects. *Id.* Plaintiff

further argues that the claims do not recite this limitation, and if the patentees wanted to add that requirement, they could have elected to do so. *Id.* Plaintiff contends that this requirement is inconsistent with the invention. *Id.* (citing '356 Patent at Abstract, 2:21–26).

Defendants respond that claim 4 explicitly requires notifying the user of the status information. (Dkt. No. 102 at 22). Defendants argue that the notification must notify the user "whether or not" the action(s) specified by the status information was "authorized or not." *Id.* at 23. According to Defendants, claim 4 reflects that "every notification" provided to the user must include whether the action(s) were either authorized or the action(s) were not authorized. *Id.* Defendants argue that if claim 4 were construed otherwise, it would recite optional or permissive limitations that do not narrow the scope of the independent claims. *Id.*

Plaintiff replies that Defendants' construction creates an additional requirement that does not appear in claim 4. (Dkt. No. 106 at 12). Plaintiff argues that claim 4 depends from claims 1 and 3, and that claims 3 and 4 narrow claim 1 by adding an additional steps. *Id.* According to Plaintiff, claim 4 does not require that the notification occurs with "every notification" sent, it just creates an additional notification. *Id.*

Defendants reply that claim 4 explicitly requires notifying the user with every notification the status information and "whether or not" the action(s) specified by the status information was "authorized or not." (Dkt. No. 119 at 10). Defendants argue that the action(s) were either authorized or not authorized, and claim 4 reflects that "every notification" provided to the user must include this designation. *Id.*

2. Analysis

The phrase "notifying the user of whether or not the addition, removal, return, defective status, or movement of the objects is authorized or not" appears in asserted claim 4 of the '356

Patent. The Court finds that Defendants' construction adds an unwarranted limitation to dependent claim 4. Defendants argue that the authorization status of an event must be included with every notification sent. The Court disagrees and finds that this would create an additional requirement that does not appear in claim 4. Claim 4 depends from claims 1 and 3. Claim 3 narrows claim 1 by adding the additional step of "further comprising notifying the user of [an event]." Claim 4 further narrows claim 3 by adding the additional step of notifying the user of whether the event was authorized or not. Claim 4 does not require that the notification occurs with "every notification" sent, it just creates an additional notification. Thus, the step is not improperly "optional," as Defendants contend. (Dkt. No. 102 at 23). If the recited notification step does not occur, then claim 4 is not infringed.

3. Court's Construction

The phrase **"notifying the user of whether or not the addition, removal, return, defective status, or movement of the objects is authorized or not"** will be given its **plain and ordinary meaning.**

I. "monitoring, using a wireless tracking system . . . locations and movements of the entity and objects" (term 10)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"monitoring, using a wireless tracking system . . . locations and movements of the entity and objects"	Plain and ordinary meaning. See IV's proposed construction and evidence for "entity" above	"wireless tracking system": "close proximity tracking system" "entity": "a person or robot" "objects": "inventoried items" The remainder of the language should be construed: "monitoring, …the locations and movements of the entity and objects"

1. The Parties' Positions

The parties dispute whether the term "wireless tracking system" requires a "close proximity

tracking system," as Defendants propose. The parties also dispute whether "objects" should be construed to mean "inventoried items," as Defendants propose. Regarding the term "wireless tracking system," Plaintiff argues that nothing in the specification demands that wireless mean "close proximity." (Dkt. No. 91 at 30). Plaintiff contends that the specification contemplates wireless tracking systems that are used in large areas such as video stores, libraries, rental stores, as well as entire organizations. *Id.* (citing '356 Patent at 3:25–29, 3:44–49). Plaintiff also argues that the wireless tracking systems may include a server that communicates via "network interface, telephone interface, or other wireless interface," which suggests a system broader than a "close proximity tracking system." (Dkt. No. 91 at 30).

Defendants respond that Plaintiff mistakenly equates the size of the environment monitored with the range at which the wireless technologies disclosed in the patent can operate. (Dkt. No. 102 at 24). Defendants argue that the patent describes wireless tracking technology including active and passive RFID, infrared (IR), optical, and ultrasound, all of which require tracked tags be in close proximity to a reader to operate. *Id.* (citing '356 Patent at 1:23–28, 4:40–47). According to Defendants, the patent does not contemplate global range wireless technologies such as Global Position Satellite (GPS). Regarding the term "objects," Defendants argue that the patent equates "objects" with "items in inventory" without variation. (Dkt. No. 102 at 24). Defendants contend that their construction reflects this feature of the claimed "objects" rather than leave the jury guessing as to what may be considered an "object." *Id.*

Plaintiff replies that "close proximity tracking system" is ambiguous and inaccurately characterizes the patent's "wireless tracking systems." (Dkt. No. 106 at 13). Plaintiff argues that the just because the patent does not explicitly list "GPS," does not mean GPS cannot be part of the recited "wireless tracking system." *Id.* Plaintiff contends that the '581 Patent demonstrates that

GPS was a known feature of PDAs at the time the '356 Patent was filed. *Id.* (citing '581 Patent at 2:10–19). Plaintiff also argues that a jury would not be left "guessing" as to what an "object" is because the term has a readily understood meaning. (Dkt. No. 106 at 8).

2. Analysis

The phrase "monitoring, using a wireless tracking system . . . locations and movements of the entity and objects" appears in asserted claims 1, 35, and 51 of the '356 Patent. Regarding the term "wireless tracking system," the Court rejects Defendants' construction. Defendants argue that Plaintiff mistakenly equates the size of the environment monitored with the range at which the wireless technologies disclosed in the patent can operate. (Dkt. No. 102 at 24). Defendants contend that the patent does not contemplate global range wireless technologies such as Global Position Satellite (GPS). *Id.* The Court disagrees with Defendants' characterizations.

The disputed phrase requires "monitoring . . . locations and movements of the entity and objects *within the controlled space*." The Court will construe "controlled space" as "a location configured to provide secure and traceable access to objects." Contrary to Defendants' suggestion, the size of the environment does impact the range of the wireless tracking system because it monitors movement "within the controlled space." The specification discloses that "[w]hile the present invention is explained in the environment of storage room 110, the scope of the invention may also include other environments in which objects are stored and are occasionally removed on a permanent or temporary basis (e.g., video stores, libraries, rental stores, etc.). The storage room 110 may have multiple objects in inventory 112, 114, 116, etc., stored in a variety of ways (e.g., on shelves, in boxes, on tables, etc.)." '356 Patent at 3:44–52. As indicated, the specification contemplates wireless tracking systems that may include large areas such as video stores, libraries, or rental stores. Moreover, Defendants' construction adds ambiguity regarding the boundaries by

introducing the adjective "close," which is not used in relations to the controlled space in the intrinsic evidence. Accordingly, the Court rejects Defendants' "close proximity" construction.

Regarding the term "objects," the Court will give the term its plain and ordinary meaning. Defendants contend that the patent equates "objects" with "items in inventory." (Dkt. No. 102 at 24). The Court disagrees that the term "objects" is so limited. Although "objects in inventory" is prevalent throughout the specification, the term "objects" by itself is not necessarily limited to "inventoried items," as Defendants contend.

3. Court's Construction

The phrase **"monitoring, using a wireless tracking system . . . locations and movements of the entity and objects"** will be given its **plain and ordinary meaning.**

J. "tracking tags at several successive points of [a/the] business process" (term 14) and "each tag at each successive point" (term 15)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"tracking tags at several successive points of [a/the] business process"	IV proposes the following construction for the following claim language: "successive": "following one after another" "tag": [AGREED] The remainder of the language should be given its plain and ordinary meaning.	"several successive points of [a/the] business process": "an uninterrupted sequence of points for completing a service or product" "tag": [AGREED] The remainder of the language should be construed: "following tags along [a/the] business process."
"attempting to read each tag at each successive point" / "reading each tag at each successive point"	Plain and ordinary meaning See IV's proposed construction for "successive" See agreed-upon construction for "tag"	"each tag at each successive point": "every tag as it reaches every one of the points along the uninterrupted sequence of points for completing a service or product" The remainder of the language should be given its plain and ordinary meaning.

1. The Parties' Positions

The parties dispute whether "successive points" must follow "one after another," as Plaintiff proposes, or if they must be "an uninterrupted sequence of points," as Defendants propose. Plaintiff contends that the '715 Patent uses the simple, ordinary meaning for this term. (Dkt. No. 91 at 15) (citing '715 Patent at 1:8–11, Figure 1). Plaintiff argues nothing in the patent dictates that the tag reads must be continuous or "uninterrupted." (Dkt. No. 91 at 15). According to Plaintiff, "successive points" are simply points that follow one after another. *Id.* Plaintiff further argues that Defendants propose substituting "every" for "each" in term 15. *Id.*

Defendants respond that the '715 Patent uses the term "several successive points of [a/the] business process" to refer to an uninterrupted sequence of points for completing a service or process. (Dkt. No. 102 at 25) (citing '715 Patent at 1:7–15). Defendants argue that the '715 Patent is premised on the concept that tag tracking occurs over an uninterrupted sequence of points for completing a business process. (Dkt. No. 102 at 25) (citing '715 Patent at 1:45–49, 3:53–4:2). According to Defendants, all business processes disclosed in the '715 Patent comprise an uninterrupted sequence of points for completing a service or product. (Dkt. No. 102 at 26). Defendants argue that uncertainty regarding the sequence would prevent all disclosed embodiments of the patent from making reliable assumptions about known data in order to infer missing data. *Id.*

Regarding term 15, Defendants argue that the patent uses the term "*each* tag *at each* successive point" to require an attempted read of every tag as it reaches every one of the successive points of the business process. *Id.* (citing Dkt. No. 102-21). According to Defendants, this again accounts for the fact that the patent relies on precision with respect to known information about tag reads to make reliable assumptions when inferring missing tag read data. (Dkt. No. 102 at 27) (citing '715 Patent at 1:45–49, 3:53–4:2). Defendants also argue that the claims do not make sense

under Plaintiff's construction. (Dkt. No. 102 at 27).

Plaintiff replies that "uninterrupted" never appears in the '715 Patent. (Dkt. No. 106 at 13). Plaintiff argues that Defendants' construction reads out the word "several" from claims 1, 9 and 11. *Id.* According to Plaintiff, Defendants' construction essentially requires substituting "continuous," "all," or "every" for the word "several," which is not supported by the intrinsic record or the plain meaning of "several." *Id.* at 13-14. Plaintiff contends that "each successive point" does not mean "every one of the points along the uninterrupted sequence of points." *Id.* at 14. Plaintiff argues that "each point" relates to each of the "several successive points" referred to in the preamble, and does not require further elaboration. *Id.* Plaintiff also argues that its construction for "successive" allows all of the words of claims 1, 9, and 11 to retain meaning.

2. Analysis

The phrase "tracking tags at several successive points of [a/the] business process" appears in asserted claims 1, 9, and 11 of the '715 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. The Court further finds that the phrase "successive points of [a/the] business process" means "locations that are reached in a known order." The specification describes "a need for RFID systems which have increased precision so that the resulting information can be relied upon to adjust business processes monitored by the RFID systems." '715 Patent at 1:38–41. To address this need, the specification discloses collecting "time-stamped readings of the tags so that missing data for a tag at a particular time can be inferred from data for the tag at a other times." *Id.* at 1:45–49. The specification further discloses the process of collecting this information as follows:

> Generally, the supply chain has a plurality of readers 106-1 to 106-N *at fixed read points or otherwise at known locations*. The readers 106 at each read point attempt to read the tags 102 as the tags pass by or come in proximity to the readers so that the tags 102 are read and tracked or monitored at successive read points. The

> expected EPCs which will enter the business process, *the order in which read points 106 will receive tags 102*, the approximate distance between read points 106 and approximate time it takes for product to travel between read points 106 *is known*. The readers record both the identification of each tag 102 which is read and the time at which each tag 102 is identified. As noted below, this recorded information *along with the known information* (expected EPCs, *the order that readers will be encountered*, the distance between readers and the time between reads by readers) *may be used to infer missing data from failed or incomplete attempts to read tags*.

Id. at 3:53–4:2 (emphasis added). As indicated, the recited points are known locations, and importantly, the order that they are reached is also known. Knowing the order of the locations is critical because it enables the system to determine when the reading of a tag does not occur. This makes it possible to infer the time of the failed or missed reading. *See, e.g.*, '715 Patent at 5:22–25 ("The processor stores a "0" in each ID cell corresponding to a particular tag when a reading of the particular tag by a particular reader is expected and the reading of the particular tag does not occur."). Accordingly, the Court construes the phrase "successive points of [a/the] business process" to mean "locations that are reached in a known order."

The Court rejects Plaintiff's construction because it is overly broad, and fails to capture the requirement of the points occurring in a known order. If the order is unknown, then the system cannot infer the time of a failed or missed reading. Indeed, the specification provides an example of this scenario. '715 Patent at 5:25–29 ("The processor 112 stores nothing in each ID cell corresponding to a particular tag when a reading of the particular tag by a reader is not expected and the reading of the particular tag does not occur."). Not knowing the order that the locations are reached results in the system storing nothing for a failed or missed reading.

The Court rejects Defendants' construction because it also does not capture that the locations are reached in a known order. Instead, it uses the term "uninterrupted sequence of points." The specification does not use the term "uninterrupted sequence," and in the context of the claims, the term is ambiguous and confusing. It raises the open-ended question of how many

points are required to make them "uninterrupted."

Regarding term 15, the phrase "each tag at each successive point" appears in asserted claims 1 and 11 of the '715 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. Defendants have not provided a persuasive reason to redraft the claim as they propose. The only support for their construction is an extrinsic dictionary definition. (Dkt. No. 102 at 27) (citing Dkt. No. 102-21 at 5). After conclusory stating that "each" means "every," Defendants rehash their argument regarding the term "successive points." The Court has resolved the dispute for the term "successive point." Accordingly, redrafting the claim as Defendants propose is unwarranted and improper. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

The Court construes the phrase **"successive points of [a/the] business process"** to mean **"locations that are reached in a known order."** The remainder of terms 14 and 15 will be given their **plain and ordinary meaning**, unless otherwise construed by the Court.

K. "populating a database with information corresponding to the reading of each tag at each [successive point/tag reading point] and the time of each reading" (term 16)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"populating a database with information corresponding to the reading of each tag at each successive point and the time of each reading" / "populating a database with information corresponding to the reading of each tag at each tag reading point and the time of each reading"	IV proposes the following construction for the following claim language: "populating": "filling in" The remainder of this claim language should be given its plain and ordinary meaning See agreed-upon construction for "tag"	"for every read of every tag at every point in the uninterrupted sequence of points for completing a service or product, inserting data corresponding to the reading of the tag into a database that previously contained no data and a time of the reading"

1. The Parties' Positions

The parties agree that populating means filling in or inserting data. The parties dispute whether the database must be empty before it is populated, as Defendants contend. Plaintiff argues that nothing in the specification, claims, or file history suggests that "populating" requires an empty database. (Dkt. No. 91 at 16). According to Plaintiff, there is no example or description of the database in the patent that indicates that the database was empty or "contained no data." *Id.*

Defendants respond that "populating a database" is inserting data into a database that previously contained no data. (Dkt. No. 102 at 28) (citing Dkt. No. 102-22; '715 Patent at 2:8–40, 4:35–6:67, TABLES 1-6, Abstract). Defendants argue that the patent illustrates only embodiments walking through population of an empty data structure. (Dkt. No. 102 at 28). According to Defendants, the patent provides no example or description where a database already containing data gets populated. *Id.*

Plaintiff replies that nothing in the patent demands that an entire database be completely empty when it is being "populated." (Dkt. No. 106 at 14). Plaintiff argues that Table 1 is not

intended to illustrate an entire database or show that the database must be empty when populated, but instead is intended to show the structure of the database of one embodiment of the invention. *Id.* Plaintiff further argues that the Abstract and Tables 1-7 are designed to show the structures of an exemplary database. *Id.* Plaintiff also contends that Defendants' construction would lead to the result of hosting thousands of databases in order to constantly populate empty databases. *Id.*

2. Analysis

The phrase "populating a database with information corresponding to the reading of each tag at each successive point and the time of each reading" appears in asserted claim 1 of the '715 Patent. The phrase "populating a database with information corresponding to the reading of each tag at each tag reading point and the time of each reading" appears in asserted claim 19 of the '715 Patent. The term "populating a database" is recited in both phrases, and the parties agree that it means at least filing or inserting data into a database. Defendants further contend that the term means "a database that previously contained no data and a time of the reading." The Court rejects this construction because the intrinsic evidence does not require a completely empty database when it is "populated." The only intrinsic evidence Defendants cite is Table 1, which is an illustration of "a data structure according to one embodiment" of the invention. '715 Patent at 4:48–62. The Court finds that this embodiment is not intended to illustrate an entire database or show that the database must be completely empty when populated. Instead, it is intended to show the structure of the database in one embodiment of the invention. Indeed, the title of Table 1 is "DATA STRUCTURE." Moreover, Defendants' citations of the Abstract and Tables 1-7 do not refer to the state of the database. Instead, they are designed to show the structures of an exemplary database.

To further support its construction, Defendants cite to an extrinsic dictionary definition for

the word "load," which indicates that it is a synonym for "populate." (Dkt. No. 102 at 27). This dictionary defines "load" as "to insert data values into a database that previously contained no data. *Synonym*: populate." (Dkt. No. 102-11 at 4). Defendants then argue that the claim language "demands the database be empty" because of such definition. (Dkt. No. 102 at 27). The Court disagrees. *See Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1377 (Fed. Cir. 2014) ("[W]e have cautioned against relying on dictionary definitions at the expense of a fair reading of the claims, which must be understood in light of the specification."); *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) ("We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history."). A person of ordinary skill reading the patent would understand that Defendants' construction is inconsistent with the purpose of the invention. A literal reading of Defendants' construction would require a company tracking RFID tags to host thousands of databases in order to constantly populate empty databases. The purpose of the invention is to increase "precision so that the resulting information can be relied upon to adjust business processes monitored by the RFID systems." '715 Patent at 1:38–41. Although the database may be empty at some point in the process, there is no requirement in the context of the patent that it cannot contain any data.

Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

The Court construes the phrase **"populating a database with information"** to mean **"inserting information into a database."** The remainder of the phrases will be given their **plain and ordinary meaning**, unless otherwise construed by the Court.

L. "track the tags through the business process" (used in term 18), "modifying part of the information in the database"/ "modified data" (used in terms 17, 18, 19, 20, 22), "as a function of" (used in terms 17, 19, 20), "other information" (used in term 17)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"modifying part of the information in the database as a function of other information in the database" / "modifying part of the information stored in the database as a function of other information stored in the database"	Plain and ordinary meaning	"modifying part of the information in the database": "changing data inserted in the database for any missed reads of a particular tag by a particular reader" "as a function of": "determined by a defined relationship to" "other information": "data inserted in the database other than the data inserted in the database for the missed reads" The remainder of the language should be given its plain and ordinary meaning.
"using the modified information to track the tags through the business process" / "the modified information is used to track tags through the business process"	Plain and ordinary meaning See agreed-upon construction for "tag"	"modified data": "changed data inserted in the database for any missed reads of a particular tag by a particular reader" "track the tags through the business process": "follow the tag from one point to another point until completion of a service or product" The remainder of the language should be given its plain and ordinary meaning.

"adjusting the supply chain as a function of the modified information"	Plain and ordinary meaning	"adjusting the supply chain": "modifying the tag pathway to include a different tag pathway" "as a function of": "determined by a defined relationship to" "modified data": "changed data inserted in the database for any missed reads of a particular tag by a particular reader"
"as a function of the modified information"	Plain and ordinary meaning	"determined by a defined relationship to the changed data inserted in the database for any missed reads of a particular tag by a particular reader."

1. The Parties' Positions

The parties dispute a number of terms that are closely related. Plaintiff contends that none of the terms require construction. Plaintiff argues that all of the proposed "terms" are commonly understood and used consistently with their plain meanings. (Dkt. No. 91 at 31). Plaintiff contends that Defendants' proposals primarily seek to limit the claims to specific embodiments in the patents. *Id.* Plaintiff also argues that for term 21, Defendants introduce "above a predetermined threshold" as a substitution for "relatively high level of errors." *Id.*

Regarding the phrase "track the tags through the business process," Defendants argue that their proposal accounts for the fact that the patent tracks tags along a process having a defined order. (Dkt. No. 102 at 28) (citing Dkt. 102-19; '715 Patent at 1:7–15). Defendants further argue that the patent is premised on the concept of following the progress of tags over an uninterrupted sequence of points for completing a business process. (Dkt. No. 102 at 28) (citing '715 Patent at 1:45–49).

Regarding the term "as a function of" and "modified information," Defendants argue that the terms form a phrase having a specific meaning, and the specification informs this meaning as

reflected in their constructions. (Dkt. No. 102 at 29). Defendants contend that the same holds for the other larger phrases of terms 17-20 and 22. *Id.* Defendants also argue that the Court should construe the larger phrases identified for terms 17-20 and 22 to reflect the context in which the patent claims and specification use these terms. *Id.*

Regarding the phrase "modifying part of the information in the database" and term "modified data," Defendants argue that the patent uses the term "modifying part of the information in the database" to require changing data inserted in the database. (Dkt. No. 102 at 29) (citing Dkt. No. 102-24). Defendants also argue that "modified data" refers to changed data inserted into the database. (Dkt. No. 102 at 30). According to Defendants, the modified data replaces the data inserted for any missed reads of a particular tag by a particular reader. *Id.* (citing '715 Patent at 6:27–67). Defendants further argue that the claims' use of certain terminology does not clearly convey the very specific data generated and referred to by the claims. (Dkt. No. 102 at 30).

Regarding the phrase "as a function of," Defendants argue that the patent uses the term "as a function of" to require a result be determined by a defined relationship to the variables directing the result. (Dkt. No. 102 at 30) (citing Dkt. No. 102-25). According to Defendants, all disclosed embodiments describe "as a function of" as the term is used in making calculations. (Dkt. No. 102 at 30) (citing '715 Patent at 1:25–32, 4:24–6:67, 7:34–57). Defendants contend that all disclosed embodiments require calculating "modified information" or using the "modified information" to calculate imputed information for adjusting the handling of products. (Dkt. No. 102 at 30) (citing '715 Patent at 4:24–6:67, 7:34–57, 1:38–41). Defendants further argue that the term should be construed to avoid jury confusion. (Dkt. No. 102 at 31). Regarding the term "other information," Defendants argue that the patent uses the term "other information" to distinguish that information from the "modified information" inserted in the database for missed reads. *Id.* (Dkt. No. 102-26).

Plaintiff replies that Defendants' constructions restricts all terms relating to "information" to "information relating to missed data reads." (Dkt. No. 106 at 15). Plaintiff contends that the specification demonstrates that "information" in the claims is not so limited. *Id.* Plaintiff argues that the invention can be used to track missed tag reads (a tag read that did not occur) or "misreads" (a tag read with incorrect information). *Id.* (citing '715 Patent at 1:7–15, 7:10–23, 7:67–8:60). According to Plaintiff, Defendants' claims that the patent only teaches tracking and modifying information about "missed reads" is false. (Dkt. No. 106 at 15).

Defendants reply that the portion of the patent cited by Plaintiff does not concern the claimed modification "as a function" of anything described in the portions of the patent that Plaintiff cited in its opening brief. (Dkt. No. 119 at 10).

2. Analysis

The phrase "modifying part of the information in the database as a function of other information in the database" appears in asserted claims 1 and 19 of the '715 Patent. The phrase "modifying part of the information stored in the database as a function of other information stored in the database" appears in asserted claim 11 of the '715 Patent. The Court finds that the phrases are used consistently in the claims and are intended to have the same general meaning in each claim.

The phrase "using the modified information to track the tags through the business process" appears in asserted claim 1 of the '715 Patent. The phrase "the modified information is used to track the tags through the business process" appears in asserted claim 11 of the '715 Patent. The Court finds that the phrases are used consistently in the claims and are intended to have the same general meaning in each claim.

The phrase "adjusting the supply chain as a function of the modified information" appears

in asserted claims 4 and 19 of the '715 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. The phrase "as a function of the modified information" appears in asserted claims 5-8, 14-19, and 23-26 of the '715 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim.

Regarding the phrase "modifying part of the information in the database," the Court construes the phrase to mean "changing information in cells where data is missing for a particular tag by a particular reader." The specification describes "a need for RFID systems which have increased precision so that the resulting information can be relied upon to adjust business processes monitored by the RFID systems." '715 Patent at 1:38–41. To address this need, the specification discloses collecting "time-stamped readings of the tags so that missing data for a tag at a particular time can be inferred from data for the tag at a other times." *Id.* at 1:45–49.

Specifically, "processor 108 stores in each corresponding cell of the data structure information indicating whether or not each tag was read at each successive reader." *Id.* at 5:12–14. The specification provides an example of a cell that indicates that a tag was not read. Referring to Table 1, the specification states that "[t]he processor stores a '0' in each ID cell corresponding to a particular tag *when a reading of the particular tag by a particular reader* is expected and the reading of the particular tag does not occur." *Id.* at 5:22–25 (emphasis added).

TABLE 4

DATA STRUCTURE

	106-1		106-2		106-3		106-4	
	ID	Date	ID	Date	ID	Date	ID	Date
A	1	12:10	1	12:20	1	12:30	1	12:40
B	1	12:10	1	12:20	1	12:30	1	12:40
C	1	12:10	1	12:20	0	12:30+	1	12:40
D	1	12:10	1	12:20	0	12:30+	1	12:40

’715 Patent at TABLE 4 (annotated). When this occurs, the specification states that “*[i]n cells where data is missing, the tool 112 modifies the information in the cell* as a function of other cells in the data structure.” *Id.* at 5:14–16, *see also, id.* at 8:47–52 (“A database can be updated by either filling in the previously missed information for portal C (e.g., writing an estimated time that the tag passed through portal C) or by adding a record indicating that the read at portal C was missed, and giving the estimated time that the tag passed through C.”). Accordingly, the Court construes “modifying part of the information in the database” to mean “changing information in cells where data is missing for a particular tag by a particular reader.”

Plaintiff contends that the specification indicates that “information” is not limited to “information relating to missed data reads.” According to Plaintiff, the patent teaches tracking “information about the product, including the intended destination of the product.” (Dkt. No. 106 at 15) (citing ’715 Patent at 8:22–31). Plaintiff argues that if a tag is detected in an unexpected location, the patent teaches that the database can be modified to “indicate a new destination of the product,” or the product can be re-routed to the appropriate place. (Dkt. No. 106 at 15) (citing ’715 Patent at 8:22–31). Plaintiff’s argument is divorced from the context of the claims. As discussed above, “successive points” means “locations that are reached in a known order.” The example that Plaintiff points to includes an “unexpected” location, which would be outside the scope of a known order. A person of ordinary skill in the art would not understand the scope of the claims to be so broad to include any modification to the database, as Plaintiff suggests. Instead, the context of the recited modification is one where information is changed in cells where data is missing for a particular tag by a particular reader.

Regarding the term “modified information,” the Court notes that the term relies on the

previous phrase of "modifying part of the information" for antecedent basis. Therefore, the term should be construed to mean "information that was changed."

Regarding the phrase "as a function of other information," Defendants propose construing the terms "as a function" and "other information" separately. For the term "as a function," Defendants argue that the patent uses the term to require a result to be determined by a defined relationship to the variables directing the result. (Dkt. No. 102 at 30). For the term "other information," Defendants contend that the patent uses the term "other information" to distinguish that information from the "modified information" inserted in the database for missed reads. *Id.* at 31.

The Court finds that the terms should be construed together as the phrase "as a function of other information." The Court further finds the phrase "as a function of other information" to mean "based on other information in other cells in the data structure." For example, the specification states the following:

> In this case, the processor 108 executes the data modification tool 112 to modify the information in the cells having information relating to tags C and D as read by reader 106-3. *The information is modified as a function of other information in other cells in the data structure. In TABLE 4, tag C was read by reader 106-2 at 12:20 and by reader 106-4 at 12:40. Thus, the 12:30+ times for tags C and D are expected times.* The 0 in the ID column of reader 106-3 indicates missing data because tag C should have been read by reader 106-3 at 12:30. A similar analysis applies to tag D. After execution of tool 112, the data structure would be as shown in TABLE 5 (with the * indicating the modified data).

'715 Patent at 6:32–66 (emphasis added). As indicated by this example, the information in the database is modified "based on other information in other cells in the data structure." Specifically, the information contained in the other cells related to tag C and reader 106-2 and 106-4 is used to change the missing data. Accordingly, the Court construes the phrase "as a function of other information" to mean "based on other information in other cells in the data structure."

The Court rejects Defendants' construction of "as a function of" because "determined by

a defined relationship to" is less clear than "based on." The Court also rejects Defendants' construction of "other information" because "data inserted in the database other than the data inserted in the database for the missed reads" is less clear than "other information in other cells in the data structure."

Regarding the phrase "track the tags through the business process," Defendants argue that their construction accounts for the fact that the patent tracks tags along a process having a defined order. (Dkt. No. 102 at 28). As discussed above for the term "successive points," the Court's construction captures the requirement of a known order. Moreover, the claim language is unambiguous and is easily understandable by a jury.

Regarding the phrase "adjusting the supply chain," Defendants do not provide any arguments in support of their construction in either their opposition brief or sur-reply brief. The Court finds that the claim language is unambiguous and is easily understandable by a jury. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

The Court construes the phrase **"modifying part of the information in the database"** to mean **"changing information in cells where data is missing for a particular tag by a particular reader,"** and the term **"modified information"** to mean **"information that was changed."** The Court construes the phrases **"as a function of other information"** and **"as a function"** to mean **"based on other information in other cells in the data structure."** The remainder of the terms/phrases will be given their **plain and ordinary meaning**, unless otherwise construed by the Court.

M. "a tool for modifying part of the information stored in the database as a function of other information stored in the database whereby the modified information is used to track the tags through the business process" (term 22)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"a tool for modifying part of the information stored in the database as a function of other information stored in the database whereby the modified information is used to track the tags through the business process"	Plain and ordinary meaning IV disputes that this is a means-plus-function term pursuant to 35 U.S.C. § 112(6). However, to the extent that the Court determines that 35 U.S.C. § 112(6) applies, IV proposes the following function and structure: Function: modifying part of the information stored in the database as a function of other information stored in the database whereby the modified information is used to track the tags through the business process Structure: a database and a data modification tool, e.g., client software and a processor See, e.g., '715 patent at 4:24-34, 5:12-29, 6:12 - 7:23, 8:39-60, Fig. 1.	Function: to modify part of the information stored in the database as a function of other information stored in the database whereby the modified information is used to track the tags through the business process Structure: processor and data modification tool, the data modification tool being a software algorithm for changing data inserted in the database for any missed reads of a particular tag by a particular reader determined by a defined relationship to data inserted in the database other than the data inserted in the database for the missed reads of the particular tag by the particular reader, by which the changed data is used to follow the tags from one point to another until completion of a service or product.

1. The Parties' Positions

The parties dispute whether "a tool for modifying part of the information . . . " is subject to § 112(6). Plaintiff contends that the term on its face does not use "means," and therefore is not presumed to be subject to § 112(6). (Dkt. No. 91 at 31). Plaintiff argues that the term has a sufficiently definite structure because its meaning is clear to a person of ordinary skill in the art. *Id.* at 32. (citing '715 Patent at 4:24–34, 5:12–29, 6:12–7:23, 8:39–60, Figure 1). In the alternative, Plaintiff contends that the Court should adopt its alternative construction, which it contends discloses the proper function consistent with the claim language and the corresponding structure. (Dkt. No. 91 at 32).

Defendants respond that the word "tool" in claim 11 amounts to nothing more than a verbal construct used in a "manner that is tantamount to using the word 'means.'" (Dkt. No. 102 at 31) (citing *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350-51 (Fed. Cir. 2015)). Defendants contend the patentees "merely replaces the term 'means' with [a] 'nonce' word" that refers only to a "generic 'black box' for performing the recited computer-implemented functions." *Id.* Defendants argue that support for the recited structure is found in the patent. (Dkt. No. 102 at 32) (citing '715 Patent 2:7–3:15, 4:24–13:31, Tables 1-7, Figures 1, 4).

Plaintiff replies that "tool" is not a "nonce term" as used in the context of the '715 Patent. (Dkt. No. 106 at 15). Plaintiff argues that the alleged function supplies any required algorithm. *Id.* Plaintiff contends that "information" is not limited to "missed reads of the particular tag by the particular reader." *Id.* Plaintiff further contends that Defendants' structure is not language that appears in the specification. *Id.*

2. Analysis

The phrase "a tool for modifying part of the information stored in the database as a function of other information stored in the database whereby the modified information is used to track the tags through the business process" appears in asserted claim 11 of the '715 Patent. The Court finds that the term is subject to § 112(6). "It is well settled that [a] claim limitation that actually uses the word 'means' invokes a rebuttable presumption that § 112, [¶] 6 applies." *Apex Inc. v. Raritan Comput., Inc.*, 325 F.3d 1364, 1371 (Fed. Cir. 2003) (quotation omitted). It is also equally understood that "a claim term that does not use 'means' will trigger the rebuttable presumption that § 112(6) does not apply." *Id.* at 1371 (quotation omitted). The presumption against the application of § 112(6) may be overcome if a party can "demonstrate[] that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure

for performing that function.'" *Williamson*, 792 F.3d at 1348. "In undertaking this analysis, we ask if the claim language, read in light of the specification, recites sufficiently definite structure to avoid § 112, ¶ 6." *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014) (citing *Inventio AG v. Thyssenkrupp Elevator Ams. Corp.*, 649 F.3d 1350, 1357 (Fed. Cir. 2011).

Here, there is a rebuttable presumption that § 112(6) does not apply because the claim does not recite the word "means." However, the Court finds that Defendants have rebutted the presumption. The intrinsic evidence demonstrates that a person of ordinary skill in the art would not understand "tool" to connote sufficient structure. The specification indicates that the "tool" is a software module executed by a processor. Specifically, the specification states that "[a]ccording to one embodiment of the invention, *a data modification tool 112 such as a software module executed by processor 108* modifies part of the information stored in the database 110 as a function of other information stored in the database 110 so the modified information may be used to track the tags 102 through the business process 104." '715 Patent at 4:24–30 (emphasis added).

In addition, Figure 1 illustrates the "DATA MODIFICATION TOOL" as a black box contained within processor 108. Moreover, the term "tool" by itself does not include any modifiers that impart sufficient structure. Thus, Defendants have "demonstrated that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'" *Williamson*, 792 F.3d at 1348 (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

For mean-plus-function limitations implemented by computer software, the corresponding structure described in the patent specification must include an algorithm for performing the function. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). In other words, the corresponding structure is not a general purpose computer but rather the special purpose

computer programmed to perform the disclosed algorithm. *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). Here, the specification discloses that the algorithm for performing the function is illustrated in Tables 4 and 5, along with the corresponding description:

> In this case, the processor 108 executes the data modification tool 112 to modify the information in the cells having information relating to tags C and D as read by reader 106-3. The information is modified as a function of other information in other cells in the data structure. In TABLE 4, tag C was read by reader 106-2 at 12:20 and by reader 106-4 at 12:40. Thus, the 12:30+ times for tags C and D are expected times. The 0 in the ID column of reader 106-3 indicates missing data because tag C should have been read by reader 106-3 at 12:30. A similar analysis applies to tag D. After execution of tool 112, the data structure would be as shown in TABLE 5 (with the * indicating the modified data).

'715 Patent at 6:43–55. Accordingly, the Court finds that the corresponding structure is a processor configured to perform the steps of: (1) identifying cells where data is missing for a particular tag by a particular reader; (2) changing the information in the identified cell based on other information in other cells in the data structure; and (3) using the changed information to track the tags through the business process.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "a tool for modifying part of the information stored in the database as a function of other information stored in the database whereby the modified information is used to track the tags through the business process" as follows:

Function: The Court finds that the function is modifying part of the information stored in the database as a function of other information stored in the database whereby the modified information is used to track the tags through the business process.

Corresponding Structure: The Court finds that the corresponding structure is a processor configured to perform the steps of:

(1) identifying cells where data is missing for a particular tag by a particular reader,

(2) changing the information in the identified cell based on other information in other cells in the data structure, and

(3) using the changed information to track the tags through the business process.

N. "handheld device" (term 24)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"handheld device"	Plain and ordinary meaning	"a device sized to substantially fit within the palm of a user's hand"

1. The Parties' Positions

The parties dispute whether the term "handheld device" requires construction. Plaintiff contends that the specification explains that a "handheld data management device in accordance with the present invention can be in the form of any one of a number of commercially available hand-held devices such as personal digital assistants (PDAs), two-way pagers, and Web/WAP-enabled mobile phones." (Dkt. No. 91 at 32) (citing '581 Patent at 5:51-55). Plaintiff argues that Defendants' construction must be incorrect because it introduces confusing restrictions tethered to the size of an unspecified user's palm. (Dkt. No. 91 at 32).

Defendants respond that the plain meaning of "handheld device" requires that it is capable of being "held" in a user's "hand." (Dkt. No. 102 at 32) (citing Dkt. No. 102-27). According to Defendants, the specification describes the handheld device consistently with this requirement. (Dkt. No. 102 at 32) (citing '581 Patent at 5:58-60). Defendants also contend that Plaintiff recently argued to the PTAB that the term "handheld device" was so limited. (Dkt. No. 102 at 32) (citing Dkt. No. 102-28 at 22). Defendants also argue that the Court should construe the term because its plain meaning does not resolve the parties' dispute. (Dkt. No. 102 at 32).

Plaintiff replies that Defendants' construction would force a jury to discern what it means to "substantially fit within the palm" of an unspecified user's hand. (Dkt. No. 106 at 18). Plaintiff

argues that Defendants do not address why those added ambiguities are appropriate or what they mean. *Id.* Plaintiff further argues that its IPR response cannot be interpreted as limiting "handheld device" beyond its plain and ordinary meaning because its IPR response merely explained why the portability of a handheld device was important to the claimed invention to distinguish over prior art that required using a peripheral device to collect data. *Id.* (citing Dkt. No. 102-28 at 21-23).

Defendants respond that if Plaintiff's construction is correct, then the Court should find the claim to be indefinite. (Dkt. No. 119 at 11). According to Defendants, Plaintiff's construction suffers from the same "unspecified user" problem Plaintiff complained of with respect to Defendants' proposed construction. *Id.* Defendants also argue that Plaintiff cannot escape its statements made during the IPR. *Id.* Defendants further contend that Plaintiff is attempting to invite the Court to improperly pass judgment on the merits of its infringement position. *Id.* Defendants argue that the fact that four pieces of extrinsic evidence refer to certain accused products as "handheld" does not inform the meaning of "handheld" used in the context of the '581 Patent and Plaintiff's statements to the PTAB. *Id.*

2. Analysis

The term "handheld device" appears in asserted claims 1, 3, 4, 7-14, and 16-20 of the '581 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The Court further finds that the term "handheld device" is not confusing and should be given its plain and ordinary meaning. The Court agrees that the intrinsic evidence indicates that using a "handheld device" is an important aspect of the invention. For example, the Field of the Invention section states that "[t]he present invention is generally related to systems and methods of *managing mobile assets in the field* such as personnel,

equipment and inventory *via communications with handheld data management devices* (e.g., personal digital assistants, handheld computers, two-way pagers, Web/WAPenabled telephony, etc.) located in the field." '581 Patent at 1:23–28 (emphasis added), *see also, id.* at 3:45–47 ("It is an object of the present invention to provide a system and methods for *managing asset in the field (e.g., personnel, equipment and/or inventory) via handheld devices*.") (emphasis added).

The intrinsic evidence further indicates that the size of the handheld device is an important aspect of the invention:

> A handheld data management device in accordance with the present invention can be in the form of any one of a number of commercially available hand-held devices such as personal digital assistants (PDAs), two-way pagers, and Web/WAP-enabled mobile phones. Referring to FIG. 1, a device 10 exemplary of a prior art PDA that could implement software and/or communication methods in accordance with carrying out methods of the invention is illustrated. *The device 10 includes an outer housing 12 sufficiently small to be easily portable such that it substantially fit within the palm of a users hand*, a display 14 that can also preferably include touch-screen technology to operate in combination with control buttons 16 to provide a User Interface (UI) for operating, controlling and/or otherwise interacting with the device 10.

Id. at 5:51–64 (emphasis added). Plaintiff emphasized this point to the PTAB to distinguish the prior art. Specifically, Plaintiff argued the following:

> Using additional devices to collect field data, even if connected to the handheld device, goes against the '581 patent's stated benefit of using portable palm-sized devices for collecting field data. (See Ex. 1001, at 5:51-64) ("The device 10 includes an outer housing 12 *sufficiently small to be easily portable such that it substantially fit within the palm of a user's hand*.") Attaching additional devices for data collection reduces the ability for the device to fit in the user's hand.

Dkt. No. 102-28 at 22 (emphasis in original). Accordingly, the Court finds that the intrinsic evidence indicates that using a "handheld device" is an important aspect of the invention. However, providing a construction that specifies the size of the user's palm would create more confusion than clarity. More importantly, it is unnecessary. Plaintiff has conceded that the "handheld device" is a device that is held by a user in their hand (*i.e.*, a single hand). (Dkt. No.

147 at 44:19–25). Plaintiff further conceded that a laptop computer would not fall within the scope of the claims because it would not be held by a single hand. *Id.* To the extent that a party argues that the scope of the claims include devices that cannot be held by a user with a single hand, the Court rejects that argument. With this understanding and having rejected Defendants' indefiniteness argument, the Court finds that the term should be given its plain and ordinary meaning. *See Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015) ("Because the plain and ordinary meaning of the disputed claim language is clear, the district court did not err by declining to construe the claim term."). Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

The term **"handheld device"** will be given its **plain and ordinary meaning.**

O. "access an assessment program" (term 25) and "download a field management program" (term 26)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"access an assessment program"	"access an assessment program, which may contain or access a database"	"access an assessment program that is not a database"
"download a field management program"	Plain and ordinary meaning	"download a field management program that is not a database"

1. The Parties' Positions

The parties dispute whether the patentees disclaimed "accessing a database" in the prosecution history. Plaintiff contends that Defendants' construction is based on statements made during prosecution concerning the term "accessing an assessment program." (Dkt. No. 91 at 32) (citing Dkt. No. 91-13). Plaintiff argues that the patent confirms the difference between an assessment program and a field management program. (Dkt. No. 91 at 32) (citing '581 Patent at

7:10–24, 6:16–21, 4:6–8, Claims 1-17). According to Plaintiff, any description of "assessment program" should not be imputed to "field management program." (Dkt. No. 91 at 32).

Defendants respond by arguing that the applicants distinguished between a "program" and a "database." (Dkt. No. 102 at 33) (citing Dkt. No. 102-29 at 10). Defendants argue that the claims that issued from these arguments require "access[ing] a [] program" or "download[ing] a [] program." (Dkt. No. 102 at 33). According to Defendants, these limitations cannot be met by accessing or downloading a database, because the applicants excluded this from the claims. *Id.* Defendants further argue that the applicants' argument was used to distinguish all claims, not just claim 1. *Id.* (citing Dkt. No. 102-29 at 9-11).

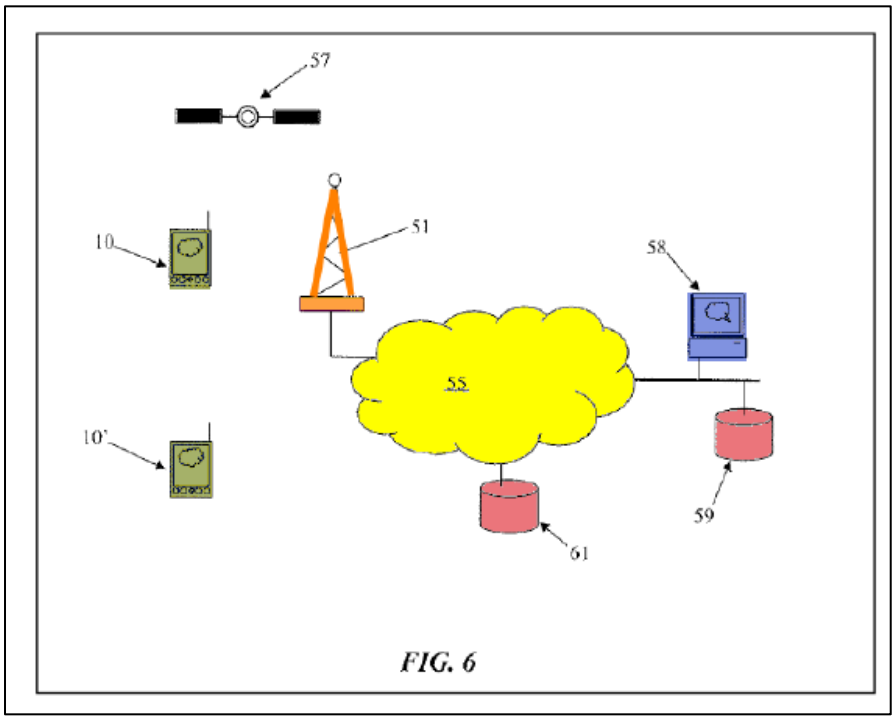
Regarding the term "assessment program," Plaintiff replies that Defendants' construction is inconsistent with the intrinsic record and the commonly understood meaning of "program." (Dkt. No. 106 at 16). Plaintiff contends that the applicants' distinction between accessing an "assessment program" and accessing a "database storing data" says nothing about how the assessment program functions. *Id.* Plaintiff argues that the applicants never disclaimed an assessment program that accesses or contains a database. *Id.* According to Plaintiff, the applicants clarified that an assessment program itself is more than just a database. *Id.* Plaintiff also contends that the claims recite using the assessment program to render and/or provide analysis of collected field data, which would require the program to access or contain a database. *Id.*

Regarding the phrase "download a field management program," Plaintiff argues that Defendants advocate applying an alleged prosecution history disclaimer (for "assessment program") to a different claim term ("field management program"), but never explain why it should apply. *Id.* at 18. Plaintiff further contends that Defendants did not address the different claim language applicants elected to use while prosecuting claims 1 and 7. *Id.* (citing Dkt. Nos.

91-12, 91-13).

2. Analysis

The phrase "access an assessment program" appears in claim 1 of the '581 Patent. The phrase "download a field management program" appears in claim 7 of the '581 Patent. The Court finds that the intrinsic record indicates that an accessing a program, is distinct from accessing a database storing data. Referring to Figure 6, the specification states that "[a]t least one device 10/10' [shown in green] can be remotely linked to a management system [shown in blue] that can provide instructions (e.g., templates, task/punch lists) and/or programs to a group of users." '581 Patent at 7:34–37.



Id. at Figure 6 (annotated). The specification further states that "[i]nstruction can be stored on a program locally on a user's personal digital assistant (PDA)." *Id.* at 7:37–38. The specification adds that "[j]ob templates and/or programs can also be centrally stored within one or more databases 61/59 [shown in pink] accessible to the management system [shown in blue] or the

directly by the handheld device 10/10' [shown in green].” *Id.* at 7:38–41. Thus, the specification draws a distinction between the management system 58 and databases 61/59.

The patentees further emphasized this distinction during prosecution. To distinguish the prior art, the patentees stated that “LeVander does not disclose *accessing an assessment program stored remotely* as recited. *The distinction is between accessing an assessment program and accessing a database storing data.*” (Dkt. No. 102-29 at 10) (emphasis added). The patentees argued that this distinction applied to all claims. (*Id.* at 9-11). Thus, the intrinsic evidence indicates that accessing an “assessment program” or downloading a “field management program” requires more than simply “accessing a database storing data.”

Indeed, the patentees conceded that accessing a database storing data was disclosed in the prior art. (Dkt. No. 102-29 at 10) (“At best, LeVander discloses that ‘. . . the database 62 may be located in the same place as the rest of the system 10 . . . or the database 62 may be located separately from a system 10 -as would be the case if a mobile system 10 or several mobile systems are used by sales people in the field and a central computer is remotely accessed by the mobile systems via telecommunications or wireless communications.’”). To the extent that a party argues that accessing an “assessment program” or downloading a “field management program” is simply accessing a database storing data, the Court rejects that argument.

However, the Court is not persuaded that the proper construction must preclude the “assessment program” or the “field management program” from accessing a database. Indeed, the specification explicitly states that “[j]ob templates and/or programs can also be centrally stored within one or more databases 61/59 [shown in pink] accessible to the management system [shown in blue] or the directly by the handheld device 10/10' [shown in green].” ’581 Patent at 7:38–41. In summary, the Court finds that accessing an “assessment program” or downloading a “field

management program" simply requires more than just accessing a database storing data.

3. Court's Construction

The Court construes the phrase **"access an assessment program"** to mean **"access an assessment program, which requires more than accessing a database storing data."** The Court further the phrase **"download a field management program"** to mean **"download a field management program, which requires more than accessing a database storing data."**

P. "position module" (term 27) and "communication module" (term 28)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"position module"	Plain and ordinary meaning IV disputes that this is a means-plus-function term pursuant to 35 U.S.C. § 112(6). However, to the extent that the Court determines that 35 U.S.C. § 112(6) applies, IV proposes the following function and structure: Function: enable identifying a geographic location of the handheld device Structure: Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software and navigation software or resources, including mapping programs See, e.g., '581 Patent at 2:13-18, 6:51-67, 8:8-12, 8:40-44, 8:64-66, 10:28-30, 12:17-20, Figs. 5, 7, 13, claims 7, 16.	Function: enable identifying a geographic location of the handheld device. Structure: Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software.
"communication module"	Plain and ordinary meaning IV disputes that this is a means-plus-function term pursuant to 35 U.S.C. § 112(6). However, to the extent that the Court determines that 35 U.S.C. § 112(6) applies, IV proposes the following function and structure: Function: download a field management program stored in a computing device located remotely from the handheld device and to communicate the field data and the geographic location of the handheld device to the computing device Structure: wireless modem, cellular wireless transmitter, including GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters See, e.g., '581 patent at 2:22-3:1, 3:58-60, 4:11-13, 6:16-38, 6:43-50, 7:1-30, 7:54-60, Figs. 3, 6, claims 2, 3, 13.	Function: download a field management program stored in a computing device located remotely from the handheld device, and communicate the field data and the geographic location of the handheld device to the computing device. Structure: wireless modem and/or cellular wireless transmitter.

1. The Parties' Positions

The parties dispute whether "position module" and "communication module" are subject

to § 112(6). Plaintiff contends that "position module" has a sufficiently definite structure because its meaning is known in the art. (Dkt. No. 91 at 33). Plaintiff argues that a skilled artisan would know the structure of "position module" in light of the specification. *Id.* (citing '581 Patent at 2:13–18, 6:52–55). In the alternative, Plaintiff argues that the corresponding structure should be construed under its construction, because Defendants' structure omits the term's navigation or mapping software element. (Dkt. No. 91 at 34) (citing '581 Patent at 6:51–67, 2:13–18, 6:51–67, 8:8–12, 8:40–44, 8:64–66, 10:28–30, 12:17–20, 8:8–12, Figures 5, 7, 13).

Regarding the term "communication module," Plaintiff contends that "communication module" has a sufficiently definite structure. (Dkt. No. 91 at 34) (citing '581 Patent at 6:26–30, 2:22–3:1, 3:58–60, 4:11–13, 6:16–38, 6:43–50, 7:57–60, Figures 3, 6). Plaintiff argues that the specification lays out many examples of wireless connectivity technology used in communication modules known in the art. (Dkt. No. 91 at 34) (citing '581 Patent at 2:22–3:1). In the alternative, Plaintiff contends that the corresponding structure should be construed under its construction, because Defendants' structure fails to include all of the corresponding structures disclosed in the patent. (Dkt. No. 91 at 34) (citing '581 Patent at 2:22–3:1, 3:58–60, 4:11–13, 6:16–38, 6:43–50, 7:57–60, 8:40–44, Figures 3, 6).

Defendants respond that the patent "merely replaces the term 'means' with 'nonce' word 'module,' thereby connoting a generic 'black box' for performing the recited computer-implemented functions." (Dkt. No. 102 at 34) (citing *Williamson*, 792 F.3d at 1350-51). Defendants argue that the Court should construe these terms in accordance with 35 U.S.C. § 112(6). (Dkt. No. 102 at 34).

Plaintiff replies that Defendants do not explain why it did not inform the PTAB that terms 27 and 28 should be governed by § 112(6) in IPR2017-00729. (Dkt. No. 106 at 19). Plaintiff also

argues that Defendants do not explain why "position module" and "communication module" are "nonce words." *Id.* According to Plaintiff, the modifiers change the meaning of "module" to convey sufficiently definite structure. *Id.*

Defendants reply that "position" and "communication" do not connote structure. (Dkt. No. 119 at 12). Defendants argue that the specification describes the modules as black boxes. *Id.* (citing '581 Patent at Figures 3, 5). Defendants further contend that Plaintiff's attempt to identify structure in the specification demonstrates the breadth and fluidity it ascribes to these terms. (Dkt. No. 119 at 12). Defendants argue that the Court should reject Plaintiff's attempt to assign no bounds to these terms, and should tether the claim scope in accordance with § 112(6). *Id.*

2. Analysis

The term "position module" appears in asserted claims 7 and 16 of the '581 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The term "communication module" appears in asserted claims 7-10, 12, and 13 of the '581 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The Court further finds that the intrinsic evidence indicates that terms are not subject to § 112(6).

Regarding the term "communication module," there is a rebuttable presumption that § 112(6) does not apply because the claims do not recite the word "means." Furthermore, the intrinsic evidence demonstrates that a person of ordinary skill in the art would understand the necessary structure of the "communication module." *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014) ("Even if a patentee elects to use a 'generic' claim term, such as 'a nonce word or a verbal construct,' properly construing that term (in view of the specification, prosecution history, etc.) may still provide sufficient structure such that the presumption against means-plus-

function claiming remains intact." (citation omitted)).

The preamble of the claim 7 recites a "handheld device," and further states that the "communication module" downloads a field management program stored in a computing device located remotely from the handheld device. Claim 7 also recites that the "communication module" communicates the geographic location of the handheld device to the computing device. Claim 8 further recites that the "communication module" wirelessly downloads the field management program stored in the computing device, and claim 9 recites that the "communication module" enables real-time access to the field management program stored in the computing device.

Likewise, claim 10 recites that the "communication module" establishes a two-way communication channel between the handheld device and the computing device, and claim 11 recites that the "communication module" is further configured to synchronize the field management program or the collected field data between the handheld device and the computing device. Thus, the claims not only describe the structural elements, but also recite the interaction between the structural elements. Accordingly, the Court finds that the term "communication module" imparts structure as described in the claims. *Envirco Corp. v. Clestra Cleanroom, Inc*., 209 F.3d 1360, 1365 (Fed. Cir. 2000) (holding that when a term itself imparts structure and its structure is described in the claim, the term is not a means-plus-function limitation).

Furthermore, the specification includes an example of the claimed "communication module" that would be well understood as structure by a person of ordinary skill in the art. For example, the specification states that "the device 10 can also include an integrated communication module 42 to facilitate wired and wireless communication." '581 Patent at 6:22–23. The specification adds that the "[w]ireless communication module 42 can include digital communication technology and/or wireless modem for facilitating local area communication." *Id.*

at 6:26–29. The specification also states that "[t]he module 42 can also use cellular wireless technology such as Cellular Digital Packet Data (CDPD)." *Id.* at 6:29–32. These examples indicate that "communication module" has an "understood meaning in the art" as structure, and thus is not subject to § 112(6). *See Chrimar Sys. v. ADTRAN, Inc.*, 2016 U.S. Dist. LEXIS 79555, *38 (E.D. Tex June 17, 2016) ("Where a claim term has an understood meaning in the art, it recites sufficient structure.").

Defendants argue that "'[m]odule' is a well-known nonce word that can operate as a substitute for 'means' in the context of § 112, ¶ 6." (Dkt. No. 102 at 34) (citing *Williamson*, 792 F.3d at 1350-51). However, Defendants err by focusing on the word "module" in isolation rather than reading "module" in the context of the language and requirements of the claim. The claims do not merely recite a "module." Instead, they recite a "communication module." While the Federal Circuit has recognized that module may be considered a nonce word where "[n]o adjective endows the claimed 'mechanism' with a physical or structural component," it has cautioned against taking such an approach in every case. *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1096–1097 (Fed. Cir. 2008) ("If claim 1 of the '254 patent had recited, e.g., a 'finger displacement mechanism,' a 'lateral projection/retraction mechanism,' or even a 'clamping finger actuator,' this court could have inquired beyond the vague term 'mechanism' to discern the understanding of one of skill in the art. If that artisan would have understood such language to include a structural component, this court's analysis may well have turned out differently.") By focusing solely on the word "module," Defendants ignore the structural requirements elsewhere in the claim that connote structure, as discussed above. In sum, Defendants have failed to "demonstrate[] that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'" *Williamson*, 792 F.3d at 1348.

Regarding the term "position module," the intrinsic evidence demonstrates that a person of ordinary skill in the art would understand the necessary structure of the "positon module." The preamble of the claim 7 recites a "handheld device," and further states that the "position module" enables identifying the geographic location of the handheld device. Claim 7 also recites that the "communication module" communicates the geographic location of the handheld device to the computing device. Claim 16 further recites that the "position module" provides navigable instructions to enable finding the geographic location of the field. Thus, the claims not only describe the structural elements, but also recite the interaction between the structural elements. Accordingly, the Court finds that the term "position module" imparts structure, which is described in the claims.

Furthermore, the specification includes an example of the claimed "position module" that would be well understood as structure by a person of ordinary skill in the art. For example, the specification states that "the handheld device can also be equipped within a position module 46 to enable the handheld device to utilize positioning systems or methods known in the art such as satellite position (e.g., Global Positioning System 55 (GPS)) or signal triangulation techniques." '581 Patent at 6:51–55. This examples indicates that "positon module" has an understood meaning in the art as structure, and thus is not subject to § 112(6).

As with the term "communication module," Defendants argue that "'[m]odule' is a well-known nonce word that can operate as a substitute for 'means' in the context of § 112, ¶ 6." (Dkt. No. 102 at 34) (citing *Williamson*, 792 F.3d at 1350-51). Again, Defendants err by focusing on the word "module" in isolation from the broader language and requirements of the claim. The claims do not merely recite a "module," but instead recite a "position module." As discussed above, the Federal Circuit highlighted the importance of this distinction in *Welker Bearing*. By focusing

solely on the word "module," Defendants ignore the structural requirements elsewhere in the claim that connote structure. In sum, Defendants have failed to "demonstrate[] that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'" *Williamson*, 792 F.3d at 1348 (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

3. Court's Construction

The term **"position module"** and **"communication module"** are not governed by 35 U.S.C. § 112(6), and will be given their **plain and ordinary meaning.**

Q. "means for accessing a program stored at the server to enable an assessment at the field using the at least one handheld device" (term 30)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for accessing a program stored at the server to enable an assessment at the field using the at least one handheld device" This claim term is governed by 35 U.S.C § 112(6).	Function: accessing a program stored at the server to enable an assessment at the field using the at least one handheld device Structure: client program on handheld device that makes a service request to a server program, user interface, processor, RAM, ROM See, e.g., '581 patent at 2:22-3:1, 3:58-67, 4:13-15, 5:58-64, 6:1-21, 6:43-50, 7:1-49, 7:51-63, 8:40-53, 10:52-64, 11:41-52, 12:8-47, Figs. 2, 6, 9, 11, 13, claims 1, 7, 8.	Function: accessing a program that is not a database stored at the server to enable an assessment at the field using the at least one handheld device. Structure: processor and client software that makes a service request to a server program, the server program fulfilling the request to enable an assessment at the field using the at least one handheld device.

1. The Parties' Positions

The parties agree that the phrase is subject to § 112(6). The parties dispute whether the recited "program" may include a database. The parties also dispute whether the corresponding structure includes "the server program fulfilling the request to enable an assessment at the field using the at least one handheld device." Plaintiff contends that Defendants' construction introduces unnecessary confusion because even an assessment program may "access" or "contain" a database.

(Dkt. No. 91 at 18). Plaintiff argues that its structure is correct because it is a complete list. *Id.* (citing '581 Patent at 2:22–3:1, 3:58–67, 4:13–15, 6:1–21, 6:43–50, 7:1–49, 7:51–63, 8:40–53, 10:52–64, 11:41–52, 12:8–47, Figures 2, 6, 9, 11, 13). Plaintiff further argues that Defendants' construction impermissibly includes functional language. (Dkt. No. 91 at 18).

Defendants respond that its structure identifies the disclosed algorithm (a service request/response pair) required to implement the means-plus-function term. (Dkt. No. 102 at 33-34) (citing '581 Patent at 7:1–20). Defendants argue that Plaintiff's structural identification is deficient because it includes only general computer elements without identifying an algorithm. (Dkt. No. 102 at 34).

Plaintiff replies that Defendants do not justify importing the term's function into its proposed corresponding structure. (Dkt. No. 106 at 16). Plaintiff argues that "accessing a program" does not require construction, but to the extent one is required, the function should be construed in accordance with its proposal for term 25. *Id.*

Defendants reply that the parties agree that the corresponding algorithm requires the client to make a request to a server, but disagree whether the algorithm requires the server to fulfill the request. (Dkt. No. 119 at 13). Defendants argue that a client cannot access a program to enable a field assessment by merely sending a request. *Id.* According to Defendants, the server must fulfill that request to enable the assessment. *Id.* Defendants contend that the patent explains that "the present invention can be effectively practiced together with a client/server programming environment" where the client makes a request and the server fulfills it. *Id.* (citing '581 Patent at 7:1–20). Defendants argue that the algorithm must perform the claimed function as recited in its construction. (Dkt. No. 119 at 13).

2. Analysis

The phrase "means for accessing a program stored at the server to enable an assessment at the field using the at least one handheld device" appears in asserted claim 18 of the '581 Patent. Having reviewed the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6). The parties generally agree on the recited function, but dispute whether it should require "accessing a program that is not a database," as Defendants propose. The intrinsic evidence indicates that accessing a program requires more than accessing a database storing data. As discussed above for terms 25 and 26, the patentees distinguished the prior art by arguing that "LeVander does not disclose accessing an assessment program stored remotely as recited. *The distinction is between accessing an assessment program and accessing a database storing data.*" (Dkt. No. 102-29 at 10) (emphasis added). The patentees argued that this distinction applied to all claims. *Id.* at 9-11. Thus, the intrinsic evidence indicates that "accessing a program" requires more than simply accessing a database storing data. Accordingly, the Court finds that the recited function is "accessing a program that is stored at the server to enable an assessment at the field using the at least one handheld device, wherein accessing a program requires more than accessing a database storing data."

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248 F.3d at 1311. The parties dispute whether the corresponding structure includes "the server program fulfilling the request to enable an assessment at the field using the at least one handheld device." Defendants contend that a client cannot access a program to enable a field assessment by merely sending a request. (Dkt. No. 119 at 13). According to Defendants, the server must fulfill that request to enable the assessment. *Id.*

The specification states that "the present invention can be effectively practiced together with a client/server programming environment." '581 Patent at 7:10–12. The specification adds that "[a]s is known by those skilled in this art, client/server is a model for a relationship between two computer programs in which one program, *the client, makes a service request from another program, the server, which fulfills the request.*" *Id.* at 7:12–16 (emphasis added). The claim language recites "accessing a program stored at the server to enable an assessment." Thus, the Court agrees that the corresponding structure for "accessing a program" is making a service request to a server program, and then having the server fulfill the request.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for accessing a program stored at the server to enable an assessment at the field using the at least one handheld device" as follows:

Function: The Court finds that the function is accessing a program that is stored at the server to enable an assessment at the field using the at least one handheld device, wherein accessing a program requires more than accessing a database storing data.

Corresponding Structure: The Court finds that the corresponding structure is a processor, along with a user interface, RAM, ROM, configured to make a service request to a server program, and a server program configured to fulfill the request.

R. "means for managing data collected at the field using the at least one handheld device responsive to program" (term 31)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for managing data collected at the field using the at least one handheld device responsive to program" This claim term is governed by 35 U.S.C § 112(6).	Function: managing data collected at the field using the at least one handheld device responsive to program Structure: industry-specific field data management software on the handheld device, such as a construction industry analysis program, HVAC analysis program, project management program, equipment readiness program, troubleshooting program, inventory tracking or ordering program, legal investigation program, or multi-user coordination programs and its equivalents, as described in Figs. 7-13 and accompanying references in the specification, along with a processor, RAM, ROM See, e.g., '581 patent at 4:16-23, 4:40-46, 6:1-18, 7:50-54, 8:40-44, 8:59-9:63, 9:64-10:44 10:45-11:12, 11:13-40, 11:41-52, 11:53-12:7, 12:8-47, Figs. 2, 7-13 and accompanying disclosures, claims 7, 14.	Function: managing data collected at the field using the at least one handheld device and responsive to the program stored at the server. Structure: industry-specific field data management software on the handheld device that implements one or more of the algorithms described in Figs. 7-13 and accompanying references in the specification, along with a processor, RAM, ROM.

1. The Parties' Positions

The parties agree that the phrase is subject to § 112(6). The parties dispute whether the recited function should include "stored at the server," as Defendants propose. Plaintiff also contends that Defendants' structure omits the various field data management software examples from the specification. Plaintiff argues that Defendants impermissibly narrows the function by requiring the program to be "stored at the server." (Dkt. No. 91 at 19). Plaintiff contends that neither claim 18 nor the patent requires a program's instructions only to reside at the server. *Id.* (citing '581 Patent at 7:34–38). Plaintiff also argues that Defendants' structure omits the various field data management software examples from the specification, which also should be included. (Dkt. No. 91 at 19) (citing '581 Patent at 4:16–23).

Defendants respond that the parties agree that the term is a computer-implemented function, but dispute the corresponding structure. (Dkt. No. 102 at 34). Defendants argue that their structure recognizes that "the corresponding structure for a § 112 ¶ 6 claim for a computer-implemented function is the algorithm disclosed in the specification." *Id.* at 35 (citing *Aristocrat Techs. Australia Pty Ltd. vs. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008)). Defendants contend that Plaintiff's structural identification is deficient because it fails to identify a specific algorithm. (Dkt. No. 102 at 35). Defendants further argue that the Court should adopt their proposed function because their construction provides clarity by construing claim 18 similarly to a corresponding requirement of claim 1, thereby requiring that "responsive to program" refers back to the originally recited "program" in the claim stored at the server. *Id.* at 36

Plaintiff replies that Defendants do not explain why additional limitations relating to where the program is stored should be added to the recited function of term 31. (Dkt. No. 106 at 17). Plaintiff also argues that it does not ignore the "algorithm" requirement. *Id.* Plaintiff contends that its structure includes each industry-specific field data management software program, which contain directly linked algorithms for achieving term's function. *Id.* (citing '581 Patent at Figures 7-13).

Defendants reply that Plaintiff uses the qualifiers "such as" and "for example" or vague identifications of "software" when identifying the required algorithms. (Dkt. No. 119 at 12). Defendants argue that the Court should rein in Plaintiff's attempts to ignore the algorithm requirement. *Id.* at 13. In the alternative, Defendants argue that the Court should find the claims indefinite for not disclosing the required algorithms. *Id.*

2. Analysis

The phrase "means for managing data collected at the field using the at least one handheld

device responsive to program" appears in asserted claim 18 of the '581 Patent. The parties generally agree on the recited function, but dispute whether it should require the program to be "stored at the server," as Defendants propose. The intrinsic evidence indicates that the program is not limited to being stored at the server. In fact, the specification states that "[a]t least one device 10/10' can be remotely linked to a management system that can provide instructions (e.g., templates, task/punch lists) and/or programs to a group of users. *Instruction can be stored on a program locally* on a user's personal digital assistant (PDA)." '581 Patent at 7:34–38 (emphasis added). Accordingly, the Court finds that the recited function is "managing data collected at the field using the at least one handheld device and responsive to program."

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248 F.3d at 1311. The parties generally agree on the corresponding structure, but dispute whether it should further include examples of the "industry-specific field data management software." Plaintiff contends that Defendants' structure omits the various field data management software examples from the specification. As indicated by Plaintiff, and by the specification, these are *examples* of industry-specific field data management software. Examples are not substantive limitations, and although potentially helpful, they are unnecessary. In the interest of providing the jury with a concise construction, the Court will not include these examples in the construction.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for managing data collected at the field using the at least one handheld device responsive to program" as follows:

Function: The Court finds that the function is managing data collected at the field

using the at least one handheld device and responsive to program.

Corresponding Structure: The Court finds that the corresponding structure is industry-specific field data management software on the handheld device that implements one or more of the algorithms as represented in in Figures 7-13 and accompanying references in the specification, along with a processor, RAM, ROM.

S. "means for enabling communicating the data collected at the field and the geographic location of the at least one handheld device between the at least one handheld device and other devices or the server" (term 33)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for enabling communicating the data collected at the field and the geographic location of the at least one handheld device between the at least one handheld device and other devices or the server" This claim term is governed by 35 U.S.C § 112(6).	Function: enabling communicating the data collected at the field and the geographic location of the at least one handheld device between the at least one handheld device and other devices or the server Structure: computer program instructions, for example Figure 13 and accompanying references in the specification, in conjunction with Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software and wireless modem, cellular wireless transmitters, including GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters, along with a processor, RAM, ROM. See, e.g., '581 patent at Abstract, 2:22-3:1, 3:58-60, 4:11-13, 6:1-38, 6:43-50, 6:51-67, 7:1-30, 7:54-57, 8:4-12, 8:40-44, 8:64-66, 10:28-30, 12:36-47, Figs. 2, 3, 5, 6, 8, 9, 13, claim 7.	Function: enabling communicating the data collected at the field and the geographic location of the at least one handheld device between the at least one handheld device and other devices or the server. Structure: software that implements the algorithm described in Fig. 13 and accompanying references in the specification, along with a processor, RAM, ROM, and wireless modem and/or cellular wireless transmitter.

1. The Parties' Positions

The parties agree that the phrase is subject to § 112(6). The parties also agree on the recited function, but disagree on the corresponding structure. Plaintiff argues that the parties agree that

Figure 13 directly links the corresponding structure to the agreed upon function, but Defendants' proposed structure omits other corresponding structure. (Dkt. No. 91 at 19). Plaintiff contends that the patent explains that "each block of the flowchart illustrations, and combinations of blocks in the flowchart illustrations, can be implemented by computer program instructions." *Id.* at 20 (citing '581 Patent at 8:40–44). According to Plaintiff, Defendants' proposal to limit the corresponding structure to Figure 13 and accompanying references in the specification omits additional corresponding structure. (Dkt. No. 91 at 20).

Defendants respond that the parties agree that the term is a computer-implemented function, but dispute the corresponding structure. (Dkt. No. 102 at 34). Defendants argue that their structure recognizes that "the corresponding structure for a § 112 ¶ 6 claim for a computer-implemented function is the algorithm disclosed in the specification." *Id.* at 35 (citing *Aristocrat Techs. Australia Pty Ltd. vs. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008)). Defendants contend that Plaintiff's structural identifications is deficient because it fails to identify a specific algorithm. (Dkt. No. 102 at 35).

Plaintiff replies that it does not ignore the "algorithm" requirement. (Dkt. No. 106 at 17). Plaintiff contends that it identified the directly linked computer program instructions as described in Figures 13 and 9, and accompanying references in the specification for terms 33 and 35. *Id.* Plaintiff argues that Defendants' structure is incomplete because a skilled artisan would know that one could use Figure 13's algorithm with the other field data management software disclosed in the patent (*e.g.*, Figs. 8 and 9). *Id.*

Defendants reply that Plaintiff uses the qualifiers "such as" and "for example" or vague identifications of "software" when identifying the required algorithms. (Dkt. No. 119 at 12). Defendants argue that the Court should rein in Plaintiff's attempts to ignore the algorithm

requirement. *Id.* at 13. In the alternative, Defendants argue that the Court should find the claims indefinite for not disclosing the required algorithms. *Id.*

2. Analysis

The phrase "means for enabling communicating the data collected at the field and the geographic location of the at least one handheld device between the at least one handheld device and other devices or the server" appears in asserted claim 18 of the '581 Patent. Having reviewed the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6). The parties have identified the recited function as "enabling communicating the data collected at the field and the geographic location of the at least one handheld device between the at least one handheld device and other devices or the server." The Court agrees that this is the function recited in the claims.

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248 F.3d at 1311. The parties generally agree on the corresponding structure, but dispute whether Figure 13 is "an example" of the program instructions, as Plaintiff proposes. According to Plaintiff, the specification indicates that each block of a flowchart can be implemented with other blocks from other flow charts by computer program instructions. (Dkt. No. 91 at 21). Plaintiff argues that one example is "block 1304 from Figure 13, relating to communicating collected data and GPS coordinates to a remote server, can be used in combination with any other program (*see e.g., id.* at Fig. 8 (block 810 providing information to remote computer for analysis); Fig. 9 (block 903 synchronizing device task status with server)) disclosed in the patent where GPS information was not provided to/or obtained from the operator." *Id.* at 20. The Court rejects Plaintiff's proposal.

The task before the Court is to determine the corresponding algorithm that performs the

recited function. The fact that an algorithm may be combined or subsumed by another algorithm misses the point. Plaintiff's contention that Figure 13 is "one example" does not resolve the claim construction dispute, and fails to provide the jury with definitive guidance on the corresponding structure that performs the recited function. Because Plaintiff failed to identify any algorithm outside of Figure 13, the Court agrees with Defendants that the corresponding structure is the algorithm disclosed in Figure 13.

The parties also dispute whether "cellular wireless transmitters" should be further qualified as "GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters," as Plaintiff proposes. The parties appear to agree that these examples would be considered "cellular wireless transmitters," which is recited in the corresponding structure. Although these examples could be potentially helpful, they are unnecessary. In the interest of providing the jury with a concise construction, the Court will not include these examples in the construction.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for enabling communicating the data collected at the field and the geographic location of the at least one handheld device between the at least one handheld device and other devices or the server" as follows:

Function: The Court finds that the function is enabling communicating the data collected at the field and the geographic location of the at least one handheld device between the at least one handheld device and other devices or the server.

Corresponding Structure: The Court finds that the corresponding structure is a processor configured to implement the algorithm as represented in Figure 13 and accompanying references in the specification, in conjunction with Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software and

wireless modem, cellular wireless transmitters, along with a processor, RAM, ROM.

T. "means for tracking a location of the at least one handheld device" (term 34)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for tracking a location of the at least one handheld device" This claim term is governed by 35 U.S.C § 112(6)	Function: tracking a location of the at least one handheld device Structure: Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software and navigation software or resources, including mapping programs See, e.g., '581 Patent at 2:13-18, 6:51-67, 8:8-12, 8:40-44, 8:64-66, 10:28-30, 12:17-20, Figs. 5, 7, 13, claims 7, 16.	Function: tracking a location of the at least one handheld device. Structure: Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software, and navigation software.

1. The Parties' Positions

The parties agree on the recited function, but disagree on the corresponding structure. Plaintiff argues that the corresponding structure should further specify that navigation software or resources includes "mapping programs." According to Plaintiff, the patent clearly links tracking a location with navigational software, including mapping programs. (Dkt. No. 91 at 20) (citing '581 Patent at 6:51–67, 8:8–12, 2:13–18, 6:51–67, 8:4–12, 8:40–44, 8:64–66, 10:28–30, 12:17–20, Figures 5, 7, 13).

Defendants respond that the parties agree that the term is a computer-implemented function, but dispute the corresponding structure. (Dkt. No. 102 at 34). Defendants argue that their structure recognizes that "the corresponding structure for a § 112 ¶ 6 claim for a computer-implemented function is the algorithm disclosed in the specification." *Id.* at 35. (citing *Aristocrat Techs. Australia Pty Ltd. vs. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008)). Defendants contend that Plaintiff's structural identifications is deficient because it fails to identify a specific algorithm. (Dkt. No. 102 at 35).

Plaintiff replies that Defendants incorrectly omit mapping programs that the patent describes. (Dkt. No. 106 at 17) (citing '581 Patent at 6:51–67, 8:8–12, 2:13–18, 6:51–67, 8:4–12, 8:40–44, 8:64–66, 10:28–30, 12:17–20, Figures 5, 7, 13).

Defendants reply that Plaintiff uses the qualifiers "such as" and "for example" or vague identifications of "software" when identifying the required algorithms. (Dkt. No. 119 at 12). Defendants argue that the Court should rein in Plaintiff's attempts to ignore the algorithm requirement. *Id.* at 13. In the alternative, Defendants argue that the Court should find the claims indefinite for not disclosing the required algorithms. *Id.*

2. Analysis

The phrase "means for tracking a location of the at least one handheld device" appears in asserted claim 19 of the '581 Patent. Having reviewed the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6). The parties have identified the recited function as "tracking a location of the at least one handheld device." The Court agrees that this is the function recited in the claims.

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248 F.3d at 1311. The parties generally agree on the corresponding structure, but dispute whether the corresponding structure should further specify that the "navigation software or resources" includes "mapping programs," as Plaintiff proposes. The specification indicates that "mapping resources" are an example of navigation software or resources. The specification states that "GPS compatible system, for example, can be used to determine device location information and can also provide navigational assistance to users (e.g., to find a field problem/job) when used in combination with navigation software or resources, *such as Internet mapping resources available from the World*

Wide Web." '581 Patent at 6:55–60. As indicated, mapping programs are one example of "navigation software or resources," and are included in the structure of "navigation software or resource." Accordingly, adding "mapping programs" to the corresponding structure is unnecessary. In the interest of providing the jury with a concise construction, the Court will not include "mapping programs" in the construction.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for tracking a location of the at least one handheld device" as follows:

Function: The Court finds that the function is tracking a location of the at least one handheld device.

Corresponding Structure: The Court finds that the corresponding structure is Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software and navigation software or resources.

U. "means for enabling updating field operation assignments for each of the at least one handheld device" (term 35)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for enabling updating field operation assignments for each of the at least one handheld device" This claim term is governed by 35 U.S.C § 112(6)	Function: enabling updating field operation assignments for each of the at least one handheld device Structure: computer program instructions, for example Figure 9 and accompanying references in the specification, in conjunction with Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software and wireless modem, cellular wireless transmitters, including GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters, along with a processor, RAM, ROM See, e.g., '581 patent at 2:22-3:1, 3:58-60, 4:11-13, 6:1-38, 6:43-50, 6:51-67, 7:1-30, 7:54-57, 8:8-12, 8:40-44, 8:64-66, 10:28-30, 10:45-11:12, Figs. 2, 3, 5, 6, 9, 11, 13.	Function: enabling updating field operation assignments for each of the at least one handheld device. Structure: the project management program that implements the algorithm described in Fig. 9 and accompanying references in the specification, along with a processor, RAM, ROM, and wireless modem and/or cellular wireless transmitter.

1. The Parties' Positions

The parties agree that the phrase is subject to § 112(6). The parties also agree on the recited function, but disagree on the corresponding structure. Plaintiff argues that the parties apparently agree that at least the disclosure related to Figure 9 directly links the corresponding structure to the agreed-upon function. (Dkt. No. 91 at 21). Plaintiff contends that Figure 9 alone is incomplete, however, because the patent indicates that "each block of the flowchart illustrations, and combinations of blocks in the flowchart illustrations, can be implemented by computer program instructions." *Id.* (citing '581 Patent at 8:40–44, 10:45–11:12, Figure 9). According to Plaintiff, Defendants proposal leaves out other clearly linked structure. (Dkt. No. 91 at 21).

Defendants respond that the parties agree that the term is a computer-implemented function, but dispute the corresponding structure. (Dkt. No. 102 at 34). Defendants argue that their structure recognizes that "the corresponding structure for a § 112 ¶ 6 claim for a computer-

implemented function is the algorithm disclosed in the specification." *Id.* at 35 (citing *Aristocrat Techs. Australia Pty Ltd. vs. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008)). Defendants contend that Plaintiff's structural identifications is deficient because it fails to identify a specific algorithm. (Dkt. No. 102 at 35).

Plaintiff replies that it does not ignore the "algorithm" requirement. (Dkt. No. 106 at 17). Plaintiff contends that it identified the directly linked computer program instructions as described in Figures. 13 and 9 and accompanying references in the specification for terms 33 and 35. *Id.* Plaintiff argues that Defendants' structure is incomplete because a skilled artisan would know that one could use Figure 13's algorithm with the other field data management software disclosed in the patent, e.g., that in Figures 8 and 9. *Id.*

Defendants reply that Plaintiff uses the qualifiers "such as" and "for example" or vague identifications of "software" when identifying the required algorithms. (Dkt. No. 119 at 12). Defendants argue that the Court should rein in Plaintiff's attempts to ignore the algorithm requirement. *Id.* at 13. In the alternative, Defendants argue that the Court should find the claims indefinite for not disclosing the required algorithms. *Id.*

2. Analysis

The phrase "means for enabling updating field operation assignments for each of the at least one handheld device" appears in asserted claim 20 of the '581 Patent. Having reviewed the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6). The parties have identified the recited function as "enabling updating field operation assignments for each of the at least one handheld device." The Court agrees that this is the function recited in the claims.

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248

F.3d at 1311. The parties generally agree on the corresponding structure, but dispute whether Figure 9 is "an example" of the program instructions, as Plaintiff proposes. According to Plaintiff, the specification indicates that each block of a flowchart can be implemented with other blocks from other flow charts by computer program instructions. (Dkt. No. 91 at 21). Plaintiff argues that one example is "blocks 905 and 906 from Fig. 9, relating to preparing unfinished and new tasks for provision to a subsequent worker, could be used in combination with any other program (see e.g., Fig. 11 (block 1102 synchronizing service schedule); Fig. 13 (block 1301 providing remote operator instructions)) disclosed in the patent where project tracking, updating progress, and focused task lists would be advantageous." *Id.*

The task before the Court is to determine the corresponding algorithm that performs the recited function. The fact that an algorithm may be combined or subsumed by another algorithm misses the point. Plaintiff's contention that Figure 9 is "one example" does not resolve the claim construction dispute, and fails to provide the jury with definitive guidance on the corresponding structure that performs the recited function. Because Plaintiff failed to identify any algorithm outside of Figure 9, the Court agrees with Defendants that the corresponding structure is the algorithm disclosed in Figure 9.

The parties also dispute whether "cellular wireless transmitters" should be further qualified as "GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters," as Plaintiff proposes. The parties appear to agree that these examples would be considered "cellular wireless transmitters," which is recited in the corresponding structure. Although these examples could be potentially helpful, they are unnecessary. In the interest of providing the jury with a concise construction, the Court will not include these examples in the construction.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for enabling updating field operation assignments for each of the at least one handheld device" as follows:

Function: The Court finds that the function is enabling updating field operation assignments for each of the at least one handheld device.

Corresponding Structure: The Court finds that the corresponding structure is a processor configured to implement the algorithm as represented in Figure 9 and accompanying references in the specification, in conjunction with Global Positioning System (GPS) hardware and software, and/or signal triangulation hardware and software and wireless modem, cellular wireless transmitters, along with a processor, RAM, ROM.

V. "means for providing data to the server for analysis" (term 36)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for providing data to the server for analysis" This claim term is governed by 35 U.S.C § 112(6).	Function: providing data to the server for analysis Structure: client software, including industry-specific field data management software on the handheld device that implements one or more of the algorithms described in Figs. 7-13 and accompanying references in the specification, in conjunction with a wireless modem, cellular wireless transmitters, including GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters, along with a processor, RAM, ROM See, e.g., '581 patent at 2:22-3:1, 3:58-60, 4:11-13, 4:32-35, 6:1-38, 6:43-50, 7:1-30, 7:54-57, 7:57-8:8, 8:20-29, 8:40-44, 8:55-58, 9:19-22, Figs. 2, 3, 6, 7-13 and accompanying disclosures, claims 12, 13.	Function: providing data to the server for analysis. Structure: industry-specific field data management software on the handheld device that implements one or more of the algorithms described in Figs. 7-8, 10, 12-13 and accompanying references in the specification, along with a processor, RAM, ROM, and wireless modem and/or cellular wireless transmitter.

1. The Parties' Positions

The parties agree that the phrase is subject to § 112(6). The parties also agree on the recited

function, but disagree on the corresponding structure. Plaintiff argues that Defendants' construction proposal incorrectly limits client software to "industry-specific field data management software," and omits GSM, CDMA, GPRS, CDPD, TCP/IP and other wireless radio transmitters. (Dkt. No. 91 at 21). Plaintiff contends that the patent directly links "client software" on the handheld device for providing data to the server. *Id.* at 22 (citing '581 Patent at 7:7–12). According to Plaintiff, the data provided to remote systems (e.g., the server) can undergo computing operations to "render a comprehensive analysis relating to the particular field problem." (Dkt. No. 91 at 22) (citing '581 Patent at 8:20–26, 2:22–3:1, 3:58–60, 4:11–13, 4:32–35, 6:1–38, 6:43–50, 7:1–30, 7:54–57, 7:57–8:8, 8:20–29, 8:40–44, 8:55–58, 9:19–22, Figures 2, 3, 6, 7). Plaintiff further argues that the specification clearly calls out GSM, CDMA, GPRS, CDPD, TCP/IP and other wireless radio transmitters as corresponding structure. (Dkt. No. 91 at 22) (citing '581 Patent at 2:22–3:1, 3:55–60, 7:28–30).

Defendants respond that the parties agree that the term is a computer-implemented function, but dispute the corresponding structure. (Dkt. No. 102 at 34). Defendants argue that their structure recognizes that "the corresponding structure for a § 112 ¶ 6 claim for a computer-implemented function is the algorithm disclosed in the specification." *Id.* at 35 (citing *Aristocrat Techs. Australia Pty Ltd. vs. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008)). Defendants contend that Plaintiff's structural identifications is deficient because it fails to identify a specific algorithm. (Dkt. No. 102 at 35).

Plaintiff replies that Defendants' structure improperly omits the algorithms disclosed in Figures 9 and 11 and accompanying references in the specification. (Dkt. No. 106 at 17). Plaintiff contends that for Figure 9, device-server synchronization (901) and updated instruction created by server (904) are directly linked means for "providing data to the server" and "retrieving enhanced

data from the server." *Id.* at 18. (citing '581 Patent at 10:45–11:12, Figure 9). Plaintiff argues that for Figure 11, synchronize schedule with inventory manager (1103) and obtain product/part consistent with schedule (1105) are directly linked means for "providing data to the server" and "retrieving enhanced data from the server." (Dkt. No. 106 at 18) (citing '581 Patent at 11:41–52, Figure 11).

Defendants reply that Plaintiff uses the qualifiers "such as" and "for example" or vague identifications of "software" when identifying the required algorithms. (Dkt. No. 119 at 12). Defendants argue that the Court should rein in Plaintiff's attempts to ignore the algorithm requirement. *Id.* at 13. In the alternative, Defendants argue that the Court should find the claims indefinite for not disclosing the required algorithms. *Id.*

2. Analysis

The phrase "means for providing data to the server for analysis" appears in asserted claim 24 of the '581 Patent. Having reviewed the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6). The parties have identified the recited function as "providing data to the server for analysis." The Court agrees that this is the function recited in the claims.

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248 F.3d at 1311. The parties generally agree on the corresponding structure, but dispute whether Figures 9 and 11 should be included, as Plaintiff proposes. In their briefing, Defendants do not provide arguments for omitting these figures. During the claim construction hearing, Defendants briefly argued that they did not think the algorithms applied to the recited function. The Court disagrees.

As discussed, the recited function is "providing data to the server for analysis." The

specification describes Figure 9 as "a flow chart of a method relating to project management . . . ." '581 Patent at 10:45-46. In describing the steps of Figure 9, the specification states that "[t]he worker reports 903 on the status of tasks at the end of the workday via synchronization with a server through wired and/or wireless means as described at the beginning of the disclosure." *Id.* at 10:61–64. Reporting on the status of tasks corresponds to "providing data to the server for analysis." Accordingly, the Court finds that the algorithm disclosed in Figure 9 is corresponding structure.

Similarly, the specification describes Figure 11 as "a flow chart outlining a method relating to inventory tracking/ordering is described." *Id.* at 11:41–42. In describing the steps of Figure 11, the specification states that "the operator can start an inventory program 1101, identify a service schedule 1102, and synchronize the schedule 1103 with an inventory manager." *Id.* at 11:45–47. Synchronizing the schedule with an inventory manager corresponds to "providing data to the server for analysis." Accordingly, the Court finds that the algorithm disclosed in Figure 11 is corresponding structure.

The parties also dispute whether "cellular wireless transmitters" should be further qualified as "GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters," as Plaintiff proposes. The parties appear to agree that these examples would be considered "cellular wireless transmitters," which is recited in the corresponding structure. Although these examples could be potentially helpful, they are unnecessary. In the interest of providing the jury with a concise construction, the Court will not include these examples in the construction.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for providing data to the server for analysis" as

follows:

Function: The Court finds that the function is providing data to the server for analysis.

Corresponding Structure: The Court finds that the corresponding structure is industry-specific field data management software on the handheld device that implements one or more of the algorithms as represented in Figures 7-13 and accompanying references in the specification, in conjunction with a wireless modem and/or cellular wireless transmitter, along with a processor, RAM, ROM.

W. "means for retrieving enhanced data from the server for use in conducting the field assessment" (term 37)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for retrieving enhanced data from the server for use in conducting the field assessment" This claim term is governed by 35 U.S.C § 112(6).	Function: retrieving enhanced data from the server for use in conducting the field assessment Structure: client software, including industry-specific field data management software on the handheld device that implements one or more of the algorithms described in Figs. 7-13 and accompanying references in the specification, in conjunction with a wireless modem, cellular wireless transmitters, including GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters, along with a processor, RAM, ROM See, e.g., '581 patent at 2:22-3:1, 3:58-60, 4:6-15, 4:24-35, 6:1-38, 6:43-50, 7:1-30, 7:31-49; 7:54-57, 7:57-8:8, 8:40-44, 9:22-28, Figs. 2, 3, 6, 7-13 and accompanying disclosures, claims 12, 13.	Function: retrieving enhanced data from the server for use in conducting the field assessment. Structure: industry-specific field data management software on the handheld device that implements one or more of the algorithms described in Figs. 7-8, 10, 12-13 and accompanying references in the specification, along with a processor, RAM, ROM, and wireless modem and/or cellular wireless transmitter.

1. The Parties' Positions

The parties agree that the phrase is subject to § 112(6). The parties also agree on the recited function, but disagree on the corresponding structure. Plaintiff argues that the parties' dispute is

nearly identical to the dispute for the previous term. Plaintiff contends that Defendants' proposal should be rejected because it incorrectly limits client software to "industry-specific field data management software," and omits GSM, CDMA, GPRS, CDPD, TCP/IP and other wireless radio transmitters. (Dkt. No. 91 at 22) (citing '581 Patent at 7:47–49, 7:57–64, 8:2–8, 2:22–3:1, 3:58–60, 4:6–15, 4:24–35, 6:1–38, 6:43–50, 7:1–30, 7:31–49, 7:54–57, 7:57–8:8, 8:40–44, 9:22–28, Figures 2, 3, 6, 7).

Defendants respond that the parties agree that the term is a computer-implemented function, but dispute the corresponding structure. (Dkt. No. 102 at 34). Defendants argue that their structure recognizes that "the corresponding structure for a § 112 ¶ 6 claim for a computer-implemented function is the algorithm disclosed in the specification." *Id.* at 35 (citing *Aristocrat Techs. Australia Pty Ltd. vs. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008)). Defendants contend that Plaintiff's structural identifications is deficient because it fails to identify a specific algorithm. (Dkt. No. 102 at 35).

Plaintiff replies that Defendants' structure improperly omits the algorithms disclosed in Figures 9 and 11 and accompanying references in the specification. (Dkt. No. 106 at 17). Plaintiff contends that for Figure 9, device-server synchronization (901) and updated instruction created by server (904) are directly linked means for "providing data to the server" and "retrieving enhanced data from the server." *Id.* at 18 (citing '581 Patent at 10:45–11:12, Figure 9). Plaintiff argues that for Figure 11, synchronize schedule with inventory manager (1103) and obtain product/part consistent with schedule (1105) are directly linked means for "providing data to the server" and "retrieving enhanced data from the server." Dkt. No. 106 at 18 ('581 Patent at 11:41–52, Figure 11).

Defendants reply that Plaintiff uses the qualifiers "such as" and "for example" or vague

identifications of "software" when identifying the required algorithms. (Dkt. No. 119 at 12). Defendants argue that the Court should not allow Plaintiff's attempts to ignore the algorithm requirement. *Id.* at 13. In the alternative, Defendants argue that the Court should find the claims indefinite for not disclosing the required algorithms. *Id.*

2. Analysis

The phrase "means for retrieving enhanced data from the server for use in conducting the field assessment" appears in asserted claim 24 of the '581 Patent. Having reviewed the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6). The parties have identified the recited function as "retrieving enhanced data from the server for use in conducting the field assessment." The Court agrees that this is the function recited in the claims.

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248 F.3d at 1311. The parties generally agree on the corresponding structure, but dispute whether Figures 9 and 11 should be included, as Plaintiff proposes. In their briefing, Defendants do not provide arguments for omitting these figures. During the claim construction hearing, Defendants briefly argued that they did not think the algorithms applied to the recited function. The Court disagrees.

As discussed, the recited function is "retrieving enhanced data from the server for use in conducting the field assessment." The specification describes Figure 9 as "a flow chart of a method relating to project management . . . ." '581 Patent at 10:45–46. In describing the steps of Figure 9, the specification states that "[a] worker's handheld device (or device assigned to the worker for the shift) can be synchronized 901 with a server to receive an updated template containing tasks for the worker at the beginning of every work shift." *Id.* at 10:52–55. The specification further

states that "[u]nfinished business recorded by a prior worker and new tasks can be prepared within a template 905 for provision to the subsequent device/worker. The process is repeated for the duration of assigned projects 906, and for subsequent (new) projects." *Id.* at 10:67–11:4. Synchronizing a handheld device with a server and repeating the process corresponds to "retrieving enhanced data from the server for use in conducting the field assessment." Accordingly, the Court finds that the algorithm disclosed in Figure 9 is corresponding structure.

Similarly, the specification describes Figure 11 as "a flow chart outlining a method relating to inventory tracking/ordering is described." *Id.* at 11:41–42. In describing the steps of Figure 11, the specification states that "[t]he technician can coordinate inventory needs with the company automatically using this method so that no more inventory than is needed is taken to the field." *Id.* at 11:50–52. The specification further describes step 1105 as "obtain product/part consistent with schedule." *Id.* at Figure 11. Coordinating inventory needs with the company corresponds to "retrieving enhanced data from the server for use in conducting the field assessment." Accordingly, the Court finds that the algorithm disclosed in Figure 11 is corresponding structure.

The parties also dispute whether "cellular wireless transmitters" should be further qualified as "GSM, CDMA, GPRS, and CDPD, TCP/IP, and/or other wireless radio transmitters," as Plaintiff proposes. The parties appear to agree that these examples would be considered "cellular wireless transmitters," which is recited in the corresponding structure. Although these examples could be potentially helpful, they are unnecessary. In the interest of providing the jury with a concise construction, the Court will not include these examples in the construction.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for retrieving enhanced data from the server for

use in conducting the field assessment" as follows:

Function: The Court finds that the function is retrieving enhanced data from the server for use in conducting the field assessment.

Corresponding Structure: The Court finds that the corresponding structure is industry-specific field data management software on the handheld device that implements one or more of the algorithms as represented in Figures 7-13 and accompanying references in the specification, in conjunction with a wireless modem and/or cellular wireless transmitter, along with a processor, RAM, ROM

X. "data tag(s)" (term 41)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"data tag" / "data tags"	"a character or set of characters associated with a data item"	"a field with a sequence of characters in a markup language used to provide information about the data and is part of the bar coded information"

1. The Parties' Positions

The parties dispute: (1) whether a "data tag" is a field with a sequence of characters in a markup language, as Defendants propose and (2) whether the construction should indicate that the "data tag" is part of the bar coded information.

Plaintiff contends that a "data tag" is a character or set of characters associated with a data item. (Dkt. No. 91 at 23). Plaintiff argues that the patent provides examples of types of data tags, including "XML tags" and "function key tags." *Id.* (citing '586 Patent at 6:8–22, 6:33–36, 4:9–10, 4:16–1, Figures 3, 5, 8, 9). Plaintiff also argues that U.S. Patent No. 7,070,103 ("the '103 Patent") confirms Plaintiff's construction of "data tag" by demonstrating the association of data tags and data items. (Dkt. No. 91 at 23) (citing Dkt. No. 91-14 at 7:5–21). Plaintiff further contends that extrinsic evidence supports its construction. (Dkt. No. 91 at 23) (citing Dkt. Nos. 91-15, 91-16,

91-17, 91-18).

Plaintiff also argues that Defendants' use of the word "field" in their construction would confuse a jury because "data field" is a separately occurring term in the claims. (Dkt. No. 91 at 23). Plaintiff further argues that Defendants' construction is redundant because the preceding claim language explicitly requires that the "plurality of bar codes encode" the data tags. *Id.* Finally, Plaintiff contends that Defendants seek to limit data tags to use "in a markup language." *Id.* at 24. According to Plaintiff, the claims demonstrate that "data tags" are not so limited. *Id.*

Defendants respond that a "data tag" is a field with a sequence of characters in a markup language used to provide information about the data and is part of the bar coded information. (Dkt. No. 102 at 37) (citing '586 Patent at 6:33–36, 4:1–2). Defendants argue that Plaintiff completely ignores that during the prosecution of the parent application No. 10/158,718, the applicants disclaimed the scope of the claimed "data tags," limiting it to a sequence of characters in a markup language. (Dkt. No. 102 at 37) (citing '586 Patent at 6:8-11; Dkt. No. 102-30 at 7-8). Defendants also contend that the examiner acknowledged in the "Allowable Subject Matter" section that the claimed "method comprises . . . creating a document in XML format[,]" thus accepting the limited claim scope. (Dkt. No. 102 at 38) (citing Dkt. No. 102-31 at 4). According to Defendants, the disclaimers made with respect to "data tags" and "tagged bar coded information" should limit the scope of "data tags" recited in the patent. (Dkt. No. 102 at 38).

Defendants also argue that their construction additionally provides clarification that "data tags" are part of the bar coded information. *Id.* Defendants contend that the claim language on its own is unclear and will confuse a jury if not clarified as demonstrated in the prosecution history. *Id.* at 38-39) (citing Dkt. Nos. 102-32 at 14; 102-33 at 13). Defendants further argue that there are several types of markup languages other than XML. (Dkt. No. 102 at 39). According to

Defendants, requiring the data tags to be in a markup language is not inconsistent with the claims of the patent and does not limit the asserted claims to have only XML data tags. *Id.*

Plaintiff replies that Defendants' construction restricts "data tag" to a markup language, reading the preferred embodiment out of the claims because every example in the specification includes "function key tags" (e.g., F01, F02) or alphabetical data tags (e.g., "DAB," "DAC"), neither of which is associated with a markup language or included in Defendants' construction. (Dkt. No. 106 at 19). Plaintiff further argues that Defendants' reference to the prosecution history amounts to a single statement that was directed to a different term in an unrelated claim from a parent application. *Id.* Plaintiff contends that such disclaimer, if any, only applies to "tagged" rather than "data tag." *Id.* According to Plaintiff, the distinction the applicants drew from the prior art had nothing to do with whether "data tag" was in a markup language. *Id.* (Dkt. No. 102-30 at 7-8). Plaintiff also contends that Defendants inaccurately import "a field with" into the construction when those words describe the field that a tag accompanies, not the tag itself. (Dkt. No. 106 at 20). Plaintiff argues, for example, that "DAB" is a "sequence of characters," and not a "field with a sequence of characters." *Id.*

Defendants reply that the specification discloses that the "sender's field tags can be identified using tags such as XML tags or 'function key tags.'" (Dkt. No. 119 at 13) (citing '586 Patent at 8-9). Defendants argue that Plaintiff's assertion that "every example in the specification" includes only function key tags or alphabetical data tags is wrong. *Id.* at 14. Defendants further argue that XML is a type of markup language. *Id.* Defendants also contend that their construction including "markup language" does not run afoul of claim differentiation because XML is not found in a claim depending from clam 7, and it is one type of "markup language." *Id.*

Defendants also argue that "data tags" transform bar coded information into "tagged" bar

coded information and thus the passage in the parent prosecution history applies to "data tags." *Id.* Defendants further contend that the specification confirms that the terms are interchangeable, disclosing "last name 'Smith' is tagged with the letters 'DAB', the data tag for the first name 'John" is the letters 'DAC.'" *Id.* (citing '586 Patent at 6:34–36, Figure 8). According to Defendants, the disclaimer therefore applies equally to both "tagged" and "data tags." (Dkt. No. 119 at 14).

2. Analysis

The term "data tag" / "data tags" appears in asserted claims 7, 8, 13, 16, 18, and 19 of the '586 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. Regarding the first issue of whether the construction should include a "markup language" requirement, Defendants argue that their construction is found in the prosecution of the Parent Application No. 10/158,718. During prosecution of the parent application, the patentees made the following arguments to distinguish the prior art symbol data string in U.S. Patent No. 6,108,656 ("Durst"):

> an end user (Office Action, page 3, numbered paragraph 6). Moreover, it is respectfully submitted that Durst et al. does not disclose "tagged" bar coded information.
>
> The term "tagged" as used in the Applicant's specification and claims takes on a meaning of accompanying a field with a sequence of characters in a markup language used to provide information about the data. The Examiner does not properly consider the limitation of "tagged"

bar codes in making the rejections or that the "tagged bar coded information" includes "data tags".

For example, the Examiner indicates that Durst et al. discloses tagged bar coded information (Office Action, page 3, numbered paragraph 6). This is not correct. The data of Durst et al. includes a symbol data string 20 that includes various fields (i.e., 21, 22, 23, 24, 25, 26) (see Figure 2). This does not, however, make these data fields "tagged". The symbol data string 20 of Durst et al. simply does not disclose "data tags" as a part of the bar coded information. Therefore, Durst et al. does not disclose all that the Examiner purports.

Dkt. 102-30 at 7-8. As Defendants correctly contend, the patentees argued that "[t]he term 'tagged' as used in the Applicant's specification and claims takes on a meaning of accompanying a field with *a sequence of characters in a markup language* used to provide information about the data." *Id.* at 7 (emphasis added). The examiner also stated in the Notice of Allowance that the claims were being allowed because "[t]he method comprises, among other steps, creating a document in XML format having tagged bar coded information including data tags and data, transmitting the document, capturing the tagged bar coded information, decoding the tagged bar code information, caching the tagged bar coded information, parsing the tagged bar coded information, stripping the data tags, and inputting the data into an application." (Dkt. No. 102-31 at 6). Thus, Defendants are correct that both the patentees and the examiner reference "XML format" in the prosecution history of the parent application.

However, it is less clear that this reference amounts to a "clear and unmistakable" disclaimer. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003). Importantly, the patentees did not argue or suggest that the "data tags" must be in a markup language. Instead, the patentees argued that "[t]he data of Durst et al. includes a symbol data string 20 that includes various fields (i.e., 21, 22, 23, 24, 25, 26) (see Figure 2)," and that this symbol data string "simply

does not disclose 'data tags' as a part of the bar coded information." (102-30 at 8). Thus, the distinction the patentees drew from the prior art was related to the lack of a "data tag," and not whether the "data tag" was in a markup language.

This is consistent with the claims that were allowed in the parent application. Claim 1 does not recite XML format. Instead, it is dependent claim 5 that recites "[t]he method of data interchange of claim 1 wherein the document is in XML format." (Dkt. No. 102-30 at 4). Moreover, the examiner also stated in the Notice of Allowance that the "Durst reference discloses a symbol data string that includes various fields such as file location pointer, launch command, user demographics, source ID, key, and code type. However, the symbol data string of Durst is different from data tags as part of the tagged bar coded information." (Dkt. No. 102-31 at 6). Thus, the examiner further specified that Durst lacked data tags as part of the tagged bar coded information, with no mention of XML format.

This is also consistent with the specification of the '586 Patent, which provides examples of different types of data tags (*e.g.*, "XML tags" and "function key tags."). '568 Patent at 6:8–22. In one example, the set of characters "F01" is associated with a "first name" data item, "F02" with a "last name" data item, and "F03" with an "age" data item. *Id.* This example is not limited to characters in a markup language. Likewise, the claims demonstrate that the term "data tags" is not limited to markup language because they do not recite "XML" in independent claims 7 and 16. Instead, it is independent claim 1 that explicitly recites "XML data tags." This indicates that when the patentees intended to limit "data tags" to a sequence of characters in a markup language, they did so explicitly.

Regarding Defendants' "a field with" limitation, the Court finds that it is improper. As discussed above, this limitation is taken directly from the statement made by the patentees during

prosecution of the parent application. However, the portion cited by Defendants is a partial quote. The complete statement is: "[t]he term 'tagged' as used in the Applicant's specification and claims takes on a meaning of *accompanying a field* with a sequence of characters in a markup language used to provide information about the data." (102-30 at 7) (emphasis added). As indicated, the complete statement is describing a *field* that a tag *accompanies*, not the tag itself. For example, "DAB" is a "sequence of characters," and not a "field with a sequence of characters." '586 at 6:33–36 ("FIG. 8 is an example of two-dimensional bar code data tags from a driver's license in which the last name 'Smith' is tagged with the letters 'DAB', the data tag for the first name 'John' is the letters 'DAC', etc.").

Regarding the second issue of whether "data tag" is part of the bar coded information, the Court agrees with Plaintiff that the limitation is redundant and unnecessary. The preceding claim language explicitly requires that the "plurality of bar codes encode" the data tags. Defendants do not disagree that their construction is redundant, but instead argue that "the claim language on its own is unclear and will confuse a jury if not clarified as demonstrated in the prosecution history when the applicants repeatedly had to explain that the data tags are part of the bar coded information to distinguish the prior art." (Dkt. No. 102 at 38-39). The Court disagrees and finds Defendants' language unnecessary. To the extent a party attempts to argue that the data tags are not part of the bar coded information, the Court rejects that argument. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

The Court construes the term **"data tag" / "data tags"** to mean **"one or more characters associated with a data item."**

Y. "an identifier identifying one of the data items" (term 43)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"an identifier identifying one of the data items"	"a character or set of characters within a data tag that identifies an associated data item"	"an additional sequence of characters identifying one of the data items"

1. The Parties' Positions

The parties dispute: (1) whether the "identifier" must be an additional sequence of characters, as Defendants propose and (2) whether the "identifier" must be "within a data tag," as Plaintiff proposes.

Plaintiff contends that the claim language itself requires that "at least one of the data tags includes an identifier identifying one of the data items." (Dkt. No. 91 at 24). Plaintiff argues that the "identifier" must be a subset of the characters that constitute the data tag. *Id.* According to Plaintiff, the applicants confirmed this during prosecution by distinguishing a data tag that includes an identifier from one that does not. *Id.* (citing Dkt. No. 91-19). Plaintiff argues that its construction captures the distinction between a data tag and an identifier without importing any unnecessary or improper additional requirements into the claim language. (Dkt. No. 91 at 24). Plaintiff also contends that Defendants' construction includes words that are confusing and inconsistent with the plain language of the claim. *Id.* For example, Plaintiff argues that the word "field" in Defendants' construction is confusing given that "data field" is a separate term. *Id.* Plaintiff also argues that Defendants' proposal to add "an additional field" is inconsistent with the plain language of the claim in which it appears, which requires that a data tag "includes" an identifier. *Id.*

Defendants respond that there is no corresponding disclosure or figure illustrating an "identifier," and that this limitation was added to the claims during prosecution. (Dkt. No. 102 at 39). Defendants further argue that the prosecution history explains what an "identifier" is not. *Id.*

(citing Dkt. No. 102-34 at 11-12). According to Defendants, "an identifier identifying one of the data items" has to be an additional sequence or portion of the characters within a data tag that identifies one of the data items. (Dkt. No. 102 at 40). Defendants argue that Plaintiff's construction is flawed because it contains the phrase "within a data tag," which is redundant with the express claim language. *Id.* Defendants further argue that Plaintiff's construction is inconsistent with the claim language because it requires the "data tag . . . identify a data field of an associated data item," which requires the identifier to identify "one of the data items," not a data field. *Id.*

Plaintiff replies that Defendants acknowledge that "an identifier identifying one of the data items" must be characters "within a data tag that identif[y] one of the data items." (Dkt. No. 106 at 20). Plaintiff contends that the word "additional" in Defendants' construction is contradictory because the sequence of characters that make up the identifier cannot be both "within the data tag" and also "additional" to the data tag's sequence of characters. *Id.*

2. Analysis

The phrase "an identifier identifying one of the data items" appears in asserted claims 7 and 16 of the '586 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim.

Regarding the first issue of whether the "identifier" must be an additional sequence of characters," the parties appear to agree that an identifier must include "characters." The claim language indicates that an identifier "identifies a data item." The claim language further indicates that the "data item" is the one associated with the "data tags." For example, claim 7 recites "wherein the plurality of bar codes encode respective data tags and data items, and wherein at least one of the data tags includes an identifier identifying one of the data items." Accordingly, the Court construes the phrase "an identifier identifying one of the data items" to mean "one or more

characters that identify one of the associated data items." The Court rejects the additional limitations proposed by the parties.

Defendants argue that there is no corresponding disclosure or figure illustrating what is an "identifier," and "[t]herefore, 'an identifier identifying one of the data items' has to be an additional sequence or portion of the characters within a data tag that identifies one of the data items, as the plain language suggests." (Dkt. No. 102 at 39-40). Defendants are correct that the specification does not explicitly discuss or illustrate an "identifier." Defendants are also correct that the prosecution history lacks meaningful guidance. However, the Court does not agree with Defendants' conclusory statement that this mean an "additional" limitation should be read into the claims. Defendants have failed to provide a persuasive reason why the "plain language suggest" the "additional" limitation.

Plaintiff argues that the "identifier" must be a subset of the characters that constitute the data tag, and proposes "within a data tag" limitation. (Dkt. No. 91 at 24). The Court agrees with Defendants that the phrase "within a data tag" is redundant. For example, claim 7 recites "where at least one of the data tags includes an identifier identifying one of the data items." Accordingly, the Court rejects this portion of Plaintiff's construction.

3. Court's Construction

The Court construes the phrase **"an identifier identifying one of the data items"** to mean **"one or more characters that identify one of the associated data items."**

Z. "data field associated with one of the data tags" (term 49)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"data field associated with one of the data tags"	Plain and ordinary meaning	"a sequence of characters that is not a data tag or an identifier"

1. The Parties' Positions

The parties dispute whether the "data field" is not the "data tag or an identifier," as Defendants propose. Plaintiff contends that Defendants' proposal is both wrong and difficult to understand as it incorporates other terms ("data tag" and "identifier") that Defendants also propose for construction. (Dkt. No. 91 at 36). Plaintiff argues that substituting Defendants' constructions for those terms in the phrase "data field associated with one of the data tags" would result in "a field with a sequence of characters that is not a field with a sequence of characters in a markup language used to provide information about the data and is part of the bar coded information or an additional field with a sequence of characters." *Id.* Plaintiff contends that this construction is nonsensical and confusing. *Id.*

Defendants respond that Figure 5 illustrates a style sheet with "data tags and field names." (Dkt. No. 102 at 42) (citing '586 Patent at 6:30–32). Defendants argue that the sequence of characters "LAST NAME" represents the data field and is associated with data tags "F01" and "DAB." (Dkt. No. 102 at 41) (citing '586 Patent at 4:6–8, Figure 5). Defendants further argue that in Figure 2, "FIRST NAME" is the data field associated with the data tag "F01" in the electronic document. (Dkt. No. 102 at 41). According to Defendants, this indicates that a "data field associated with one of the data tags" is a sequence of characters that is not a data tag or an identifier since it is a field separate from the data tag. *Id.*

Plaintiff replies that in Figure 5, "LAST NAME" is not a sequence of characters representing the data field, but instead is the data field. (Dkt. No. 106 at 23). Plaintiff argues that Defendants' construction implies that a sequence of characters (e.g., L-A-S-T-N-A-M-E) is

meaningful or must be encoded into a bar code. *Id.* Plaintiff contends that claim 18 only requires that the electronic document includes a data field associated with one of the data tags. *Id.*

2. Analysis

The Court finds that the claim language indicates that the data field is not a data tag. The phrase "data field associated with one of the data tags" appears in dependent claim 18 of the '586 Patent. Independent claim 17 recites "means for receiving an electronic document comprising a plurality of bar codes, wherein the plurality of bar codes encode respective data tags and data items, and wherein at least one of the data tags includes an identifier identifying one of the data items." As discussed above, a "data tag" is "one or more characters associated with a data item." Thus, "a data field associated with one of the data tags," cannot also be a data tag.

The specification further indicates that a "data field" is a field that may include one or more characters. Figure 2 illustrates an electronic document containing tagged bar codes. '586 Patent at 4:1–2. In Figure 2, "BRUCE" is a data field associated with the data tag "F01" in the electronic document. *Id.* at Figure 2. As illustrated, the data field associated with the data tag cannot also be a data tag since it is a field separate from the data tag.

Regarding Defendants' "identifier" limitation, the claim language recites that "the data tags includes an identifier identifying one of the data items." Thus, the claim language itself indicates that the recited "data field" is not the recited "identifier," because the identifier is included in the data tag. Therefore, the Court rejects this portion of Defendants' construction.

3. Court's Construction

The Court construes the phrase **"data field associated with one of the data tags"** to mean **"a field including one or more characters that is not a data tag."**

AA. "wherein the plurality of bar codes encode respective data tags and data items" (term 42)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"wherein the plurality of bar codes encode respective data tags and data items"	"plurality": [AGREED] See IV's proposed construction for "data tag". The remainder of the claim should be given its plain and ordinary meaning.	"plurality": [AGREED] "wherein each of the bar codes has different data tags and different data items"

1. The Parties' Positions

The parties dispute whether the phrase "wherein the plurality of bar codes encode respective data tags and data items," requires construction. Defendants contend that "respective" means "different," and propose construing the phrase to mean "wherein each of the bar codes has different data tags and different data items." Plaintiff argues that the parties have already agreed on a construction for "plurality" and have proposed constructions for "data tags," which appear within this term. (Dkt. No. 91 at 36). Plaintiff contends that the remaining words of the claim are plain English that a jury would understand. *Id.* Plaintiff further argues that "respective" does not mean "different." *Id.*

Defendants respond that each disclosed example and figure of an electronic document with tagged bar codes illustrates that each bar code encodes different data tags and data items. (Dkt. No. 102 at 40) (citing '586 Patent at Figures 2, 3, 4, 5, 8, 9). Defendants argue that the term "respective" was added to the independent claims when the claim was amended to require a "plurality of" bar codes, and in view of the Examiner's suggestion to "clarif[y] in the claims that the data tag identifies the data item (or some sort of tie)." (Dkt. No. 102 at 40) (citing Dkt. Nos. 102-35 at 10, 102-36 at 3-4, 102-37). According to Defendants, each tagged bar code disclosed in the patent must have a different data tag and different data item when compared to the other tagged

bar codes in the electronic document because there can be no duplication according to the claims. (Dkt. No. 102 at 41).

Plaintiff replies that "respective" does not mean "different." (Dkt. No. 106 at 22). Plaintiff argues that the word "respective" was added when the claims were amended to include a "plurality" of bar codes, and a plain reading of "respective" demonstrates that each data tag is encoded in the same bar code as its associated data item. *Id.* at 22-23. Plaintiff contends that nothing precludes two different bar codes from encoding the same data tag and data item, especially given the patent discloses real-world bar codes that encode multiple data tags and data items. *Id.* at 23 (citing '586 Patent at 6:4-7, Figures 5, 8).

2. Analysis

The phrase "wherein the plurality of bar codes encode respective data tags and data items" appears in claims 7 and 16 of the '586 Patent. The Court finds that the phrase is used consistently in the claims and is intended to have the same general meaning in each claim. The specification illustrates that each data tag is encoded in the same bar code as its associated data item. For example, Figure 2 is a pictorial representation of a document containing tagged bar codes. The figure illustrates that data tag "F01" is encoded in the same bar code as "BRUCE," data tag "F02" is encoded in the same bar code as "SMITH," and that "F03" is encoded in the same bar code as "45." '586 Patent at Figure 2. Thus, the intrinsic evidence indicates that each data tag is encoded in the same bar code as its associated or respective data item. Accordingly, the Court construes the phrase to mean "wherein each data tag is encoded in the same bar code as its associated data item."

Defendants argue that "each disclosed example and figure of an electronic document with tagged bar codes illustrate that each bar code encodes different data tags and data items." (Dkt. No. 102 at 40). According to Defendants, no two bar codes in an electronic document encode

either the same data tag or the same data item. *Id.* The Court disagrees and finds that the illustrated embodiments are by no means exhaustive, and only illustrate a few examples. Moreover, "it is improper to read limitations from a preferred embodiment described in the specification–even if it is the only embodiment–into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history is also informative and indicates that "respective" was added to maintain the association between each data tag and its associated data item in the context of a "plurality of bar codes." This association by no means requires each of the bar codes to have "different data tags and different data items." In sum, Defendants have failed to provide a persuasive reason to limit the claims as they propose. Nothing precludes two different bar codes from encoding the same data tag and data item, especially given that the patent discloses bar codes that encode multiple data tags and data items.

3. Court's Construction

The Court construes the phrase **"wherein the plurality of bar codes encode respective data tags and data items"** to mean **"wherein each data tag is encoded in the same bar code as its associated data item."**

BB. "means for decoding the plurality of bar codes to recover the respective data tags and data items" (term 48)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for decoding the plurality of bar codes to recover the respective data tags and data items" (proposed by IV) / "means for decoding" (proposed by Defendants) This claim term is governed by 35 U.S.C § 112(6)	Function: decoding the plurality of bar codes to recover the respective data tags and data items Structure: parsing and data cache application in combination with a bar code scanner or a high scan rate LED bar code reader In the alternative: parsing and data cache application, in combination with a bar code scanner or a high scan rate LED bar code reader, the parsing and data cache application performing the following algorithm: identifying the scanned bar coded data by data tag, matching the scanned bar coded data to the appropriate field in another electronic document or applicable software application, stripping the data tag, and inputting the stripped bar coded data into the appropriate field in the other electronic document or applicable software application See, e.g., '586 patent at 5:40-48, 5:57-67, 6:1-3, 1:26-27, 3:20-28, 3:37-47, 4:39-49, 10, 19-20, 10:52-56; U.S. Patent No.7,070,103 (incorporated by reference by the '586 patent at 2:29-36) at 3:35-36, 4:35-41, 5:61-6:2.	Function: decoding the plurality of bar codes to recover the respective data tags and data items Structure: bar code scanner or high scan rate LED bar code reader connected to a computer configured with a parsing and data cache application that identifies the scanned bar coded data by data tag, matches the scanned bar coded data to the appropriate field in another electronic document, strips the data tag, and inputs the stripped bar coded data into the appropriate field in the other electronic document

1. The Parties' Positions

The parties agree that the phrase is subject to 35 U.S.C § 112(6), and also agree on the recited function. The parties dispute: (1) whether the structure includes "or applicable software," as Plaintiff proposes and (2) whether the scanner or reader needs to be connected to a computer, as Defendants propose.

Plaintiff argues that Defendants' construction includes additional structure that is not

necessary to perform the claimed function and introduces confusion by adding references to "another electronic document." (Dkt. No. 91 at 26). Plaintiff also argues that Defendants' construction is inconsistent with the position they took in its IPR Petition. *Id.* (citing Dkt. No. 91-24). Plaintiff contends that Defendants' structure is not required because parsing and caching applications are commonly-available and well-known structures. (Dkt. No. 91 at 26) (citing '586 Patent at 5:21–26; Dkt. No. 91-14 at 4:35–41, 5:65–6:2).

Defendants respond that to avoid indefiniteness the specification must disclose the corresponding algorithm, as disclosure of the software application alone is insufficient. (Dkt. No. 102 at 42). Defendants contend that the specification discloses the corresponding algorithm for the means for decoding. *Id.* (citing '586 Patent at 5:40–48). Defendants also argue that their proposed structure is not inconsistent with the structure it proposed for the corresponding IPR, because the standard in that proceeding is the broadest reasonable interpretation. (Dkt. No. 102 at 42). Defendants further argue that the PTAB in the related IPR found that the corresponding structure for the means for decoding includes the above-referenced algorithm, and rejected a construction for the structure that included only the receiver's computer and the parsing and data cache application. *Id.* (citing Dkt. No. 102-39 at 9-10). Defendants contend that given the PTAB's means for decoding construction includes the required algorithm, the construction in this case cannot be broader. (Dkt. No. 102 at 42) (citing *Facebook, Inc. v. Pragmatus AV, LLC*, 582 F. App'x 864, 869 (Fed. Cir. 2014)).

Plaintiff replies that the function of this claim element is "decoding," and the algorithm for performing that function is scanning, parsing, and data caching. (Dkt. No. 106 at 21). Plaintiff contends that no more specific algorithm is required to perform the claimed function. *Id.* In the alternative, Plaintiff provides a second proposed structure. (Dkt. No. 106 at 21) (citing Dkt. No.

106-7). Plaintiff also argues that Defendants' structure improperly narrows the term to require "another electronic document," even though the patent explicitly recites embodiments in which the stripped bar coded data is input into an "applicable software application" instead. (Dkt. No. 106 at 21) (citing '586 Patent at 5:40–48, 5:57–67, 6:1–3, 1:26–27, 3:20–28, 3:37–47, 4:39–49; Dkt. No. 91-14 at 3:35–36, 4:35–41, 5:65–6:2).

Defendants reply that Plaintiff incorrectly asserts that the function is merely "decoding," and therefore does not require a "specific algorithm." (Dkt. No. 119 at 14). Defendants argue that "decoding" alone requires an algorithm. *Id.* at 15. Defendants contend that Plaintiff's alternate structure is flawed because it fails to include the required computer, which is the fundamental structure of claim 16. *Id.* (citing '586 Patent at 5:15–48). Defendants also contend that the claimed system includes a bar code scanner or high scan LED bar code reader that is connected to a computer configured with the parsing and data cache application. (Dkt. No. 119 at 15) (citing '586 Patent 5:40–48). Defendants further argue that Plaintiff's structure also includes "or applicable software application," which is impermissibly broader than the PTAB's structure in the IPR. (Dkt. No. 119 at 15) (citing Dkt. No. 102-39 at 8-10).

2. Analysis

The phrase "means for decoding the plurality of bar codes to recover the respective data tags and data items" appears in asserted claim 16 of the '586 Patent. Having reviewed the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6). The parties have identified the recited function as "decoding the plurality of bar codes to recover the respective data tags and data items." The Court agrees that this is the function recited in the claims.

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248

F.3d at 1311. The specification states that the corresponding structure that performs the recited function is illustrated in Figure 1 and found at 5:40–48. The specification describes Figure 1 as "a flowchart representation of the preferred method of the present invention." '568 Patent at 3:66–67. In describing the decoding illustrated in Figure 1, the specification states the following:

> In step 126, the receiver scans tagged bar codes in electronic document "A" 103. The scanned tagged bar coded data is parsed and sent to a data cache, as shown in FIG. 6. In step 127, *the parsing and data cache application* use logic and computer routines to *identify* the scanned bar coded data by "function key tag", *match* the scanned bar coded data to the appropriate field in electronic document "B" 122, *strip* the "function key tag", and *input* the stripped bar coded data into the appropriate field in electronic document "B" 122.

Id. at 5:40–48 (emphasis added). Accordingly, the Court finds that this disclosed algorithm is the corresponding structure.

Defendants argue that Plaintiff's construction fails to include the required computer, which they contend is the fundamental structure of claim 16. The preamble of claim 16 recites a "system, comprising a processor." Accordingly, a "processor" is included in the corresponding structure. Specifically, the claimed system includes a bar code scanner or high scan LED bar code reader that is connected to a processor executing a parsing and data cache application.

Defendants also argue that Plaintiff's structure of "applicable software application" is impermissibly broader than the PTAB's structure in the IPR. (Dkt. No. 119 at 15). Plaintiff contends that the patent explicitly recites embodiments in which the stripped bar coded data is input into an "applicable software application" instead of an "electronic document." (Dkt. No. 106 at 21) (citing '568 Patent at 5:57–67). Plaintiff is correct that the portion of the specification cited by it discloses an "alternate embodiment." However, the description of this alternate embodiment does not justify Plaintiff's proposal. The specification states that "[a]ll the steps described in the preferred embodiment of the present invention apply to the alternate embodiment of the present invention. The difference between the two embodiments is the type of data tagging used to identify

data." '568 Patent at 6:1–4.

Accordingly, the Court rejects including "applicable software application" in the corresponding structure because the decoding step is the same in every embodiment. Indeed, the specification indicates that the "other document" can be created by different "software applications." '568 Patent at 4:66–5:1. ("An example of document 'A' 103 is depicted in FIG. 2 using software such as MICROSOFT EXCEL or WORD on a PC to create an electronic document). Regardless of the application the document is created in, the disclosed algorithm requires performing operations in "another electronic document."

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for decoding the plurality of bar codes to recover the respective data tags and data items" as follows:

Function: The Court finds that the function is decoding the plurality of bar codes to recover the respective data tags and data items

Corresponding Structure: The Court finds that the corresponding structure is a bar code scanner or high scan rate LED bar code reader connected to a processor executing a parsing and data cache application configured to perform the steps of:

(1) identifying the scanned bar coded data by data tag,

(2) matching the scanned bar coded data to the appropriate field in another electronic document,

(3) stripping the data tag, and

(4) inputting the stripped bar coded data into the appropriate field in the other electronic document.

CC. "means for receiving an electronic document comprising a plurality of bar codes" (term 47)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"means for receiving an electronic document comprising a plurality of bar codes"(proposed by IV) / "means for receiving" (proposed by Defendants) This claim term is governed by 35 U.S.C § 112(6).	Function: "receiving an electronic document comprising a plurality of bar codes" Structure: a computer accessing a library (which may use a local hard drive or network hard drive), a computer accessing email, or a computer accessing an Internet web page on a web server See, e.g.,'586 patent at 5:10-15, 7:23-40, 7:54-58; U.S. Patent No. 7,070,103 (incorporated by reference by the '586 patent at 2:29-36) at 6:14-15	Function: "receiving an electronic document comprising a plurality of bar codes" Structure: a computer configured with software to open an electronic document from a hard drive, an email, or an Internet web page on a web server.

1. The Parties' Positions

The parties agree that the phrase is subject to 35 U.S.C § 112(6), and also agree on the recited function. The parties dispute whether "receiving" means "accessing," as Plaintiff proposes, or if it means "opening," as Defendants propose. Plaintiff argues that its construction is correct because the patent directly links a computer accessing a library, email, or an Internet webpage on a web server to "receiving an electronic document comprising a plurality of bar codes." (Dkt. No. 91 at 26) (citing '581 Patent at 2:29–36, 5:10–15, 7:23–40, 7:54–58, Figure 1; Dkt. No. 91-14 at 6:14-15.) According to Plaintiff, Defendants' structure improperly conflates "receiving" with "opening" even though the patent distinguishes the two. (Dkt. No. 91 at 26) (citing '586 Patent at 5:10–15, Figure 1).

Defendants respond that after the sender posts an electronic document to a hard drive (either a local or network hard drive), or a webpage, or sends the electronic document by email, the receiver then opens another electronic document "in a separate window on their computer in order to receive bar coded data contained in electronic document 'A' 103." (Dkt. No. 102 at 45-

46) (citing ’586 Patent at 5:10–19). Defendants contend that Plaintiff’s construction is flawed because it uses the vague term “accessing,” which will confuse the jury as to whether accessing means opening or something else. (Dkt. No. 102 at 46). Defendants also argue that Plaintiff’s construction requires a different computer access a library, access email, or access an Internet web page on a web server. *Id.* According to Defendants, Plaintiff’s proposal directly conflicts with the specification which discloses a receiver’s computer configured to do all of these functions. *Id.* (’586 Patent at 5:7–19).

Plaintiff replies that a “means for receiving an electronic document comprising a plurality of bar codes” requires a computer that “accesses” a library (or hard drive), email, or an internet web page on a web server, not one that “opens” an electronic document. (Dkt. No. 106 at 20). Plaintiff argues that Defendants’ structure improperly equates “receiving” with “opening” even though the patent distinguishes the two. *Id.* (citing ’586 Patent at 5:10–15). Plaintiff also argues that Defendants compound this problem by conflating “receiving . . . bar coded data” with “receiving an electronic document” (Dkt. No. 106 at 20). According to Plaintiff, the specification demonstrates that the bar coded data is only “received” after the bar code is scanned. *Id.* (citing ’586 Patent at 5:18–19). Plaintiff also contends that its structure does not require three separate computers, but instead includes alternative structures to perform the means for receiving. (Dkt. No. 106 at 21).

2. Analysis

The phrase “means for receiving an electronic document comprising a plurality of bar codes” appears in asserted claim 16 of the ’586 Patent. Having reviewed the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6). The parties have identified the recited function as “receiving an electronic document comprising a plurality of bar codes.” The

Court agrees that this is the function recited in the claims.

Having determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Medtronic*, 248 F.3d at 1311. The specification states that the corresponding structure that performs the recited function is illustrated in Figure 1 and found at 5:7-19. The specification describes Figure 1 as "a flowchart representation of the preferred method of the present invention." '568 Patent at 3:66–67. In describing the decoding illustrated in Figure 1, the specification states the following:

> If the decision 101 does not require data tagging and parsing an electronic document "A" 103 is created with un-tagged bar codes. Electronic document "A" 103 is posted 104, to a library 110. Library 110 may use a local hard drive 111, or network hard drive 113 to store electronic document "A" 103. Optionally, electronic document "A" 103 may be e-mailed to a selected user 112.
> *A receiver 121 opens electronic document "A" 103 in a window on their computer*. The receiver 121 also opens electronic document "B" (as shown in FIG. 7) 122, in a separate window on their computer in order to receive bar coded data contained in electronic document "A" 103.

Id. at 5:7–19 (emphasis added). As indicated, the specification states that receiver 121 opens the electronic document from a hard drive, an email, or an Internet web page on a web server. Accordingly, the Court finds that "receiving" means opening in the context of the intrinsic evidence.

Plaintiff argues that Defendants' proposed structure improperly conflates "receiving" with "opening" even though the specification distinguishes the two. (Dkt. No. 91 at 26). The Court disagrees. When faced with means-plus-function limitations, courts "must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations]." *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). Plaintiff cites the portion of the specification that describes posting the electronic document "A" to a library, and argues that it discloses "accessing." Posting or emailing is a condition precedent to "receiving." It is not a distinction between "accessing" and "opening." Instead, this portion of the

specification indicates that before the document can be opened, it has to be posted or emailed. As indicated above, the corresponding structure related to receiving is opening the electronic document.

3. Court's Construction

In light of the intrinsic evidence, the Court finds that the phrase is governed by 35 U.S.C. § 112(6), and construes the phrase "means for receiving an electronic document comprising a plurality of bar codes" as follows:

Function: The Court finds that the function is receiving an electronic document comprising a plurality of bar codes.

Corresponding Structure: The Court finds that the corresponding structure is a computer configured to perform the step of opening an electronic document from a hard drive, an email, or an Internet web page on a web server.

DD. "sending the electronic document" (term 44)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"sending the electronic document"	Plain and ordinary meaning	"e-mailing the electronic document"

1. The Parties' Positions

The parties dispute whether "sending" is limited to "emailing," as Defendants contend. Defendants argue that the specification discloses that "electronic document 'A' 103 may be e-mailed to a selected user 112." (Dkt. No. 102 at 46) (citing '586 Patent at 5:12–13, 7:54–58; 8:58–61). Defendants contend that no other form of "sending" is disclosed or even contemplated. (Dkt. No. 102 at 46). Defendants also argue that during prosecution, the applicants distinguished the term "sending" (meaning "e-mailing") from the different term "posting." *Id.* Defendants contend that the applicants cited only to the above-quoted sentence as support for "sending the electronic

document" and explained that it describes how an electronic document is "sent via email." *Id.* (citing Dkt. No. 102-40 at 14; Dkt. No. at 102-41 at 19). Defendants also contend the applicants purposely chose not refer to a broader disclosure including "posting to a library." (Dkt. No. 102 at 46-47) (citing '586 Patent at 5:9–11; Dkt. No. at 102-41 at 19).

Plaintiff replies that Defendants now propose limiting the broad term "sending" to just one method: "e-mailing." (Dkt. No. 106 at 23). Plaintiff argues that applicants chose "sending," not "e-mailing," and that applicants' identification of "e-mailing" in a provisional application was not a clear and unmistakable disavowal of claim scope. *Id.*

Defendants reply that the patent provides no disclosure or suggestion to support a broader construction of sending electronic documents other than e-mailing. (Dkt. No. 119 at 16). Defendants contend that the claim chart submitted during the prosecution of the application linked "sending" to "e-mailing." *Id.*

2. Analysis

The phrase "sending the electronic document" appears in asserted claim 7 of the '586 Patent. The Court finds that the intrinsic evidence does not indicate that "sending" is limited to "e-mailing." The Court first notes that claim 7 is drafted from the perspective of the device that initially creates the document, and then sends the electronic document. In describing the steps for creating and sending document, the specification states that "[e]lectronic document 'A' 103 is posted 104, to a library 110. Library 110 may use a local hard drive 111, or network hard drive 113 to store electronic document 'A' 103. *Optionally*, electronic document 'A' 103 *may* be e-mailed to a selected user 112." '568 Patent at 5:9–14 (emphasis added). Here, the specification indicates that "sending" may include sending the document to be posted to a library, or optionally, emailing the document to a user. Thus, contrary to Defendants' contention, "sending" is not limited

to only emailing.

Defendants also argue that during prosecution, the patentees distinguished the term "sending" from the term "posting." (Dkt. No. 102 at 46). The Court disagrees with Defendants' characterization of the prosecution history. During prosecution, the patentees provided a chart citing to the provisional application as support for the respective claim elements. For the phrase "sending the electronic document," the patentees cited to "13:6-7 (describing that electronic document may be sent via email to a receiver)." (Dkt. No. 102-40 at 9, 14). The Court finds that the patentees' statement does not rise to the level of a "clear and unmistakable" disclaimer. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003). The patentees were not equating "sending" with "emailing." Instead, they were pointing to one example that provides support for the claim element. Thus, the phrase "sending the electronic document" will be given its plain and ordinary meaning. To the extent that Defendants argue that "sending" means only "emailing," the Court rejects that argument.

3. Court's Construction

The term **"sending the electronic document"** will be given its **plain and ordinary meaning.**

EE. "operations for data interchange" / "data interchange" (term 38)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"operations for data interchange" / "data interchange"	Plain and ordinary meaning	"sending and receiving electronic documents having multiple tagged bar codes"

1. The Parties' Positions

The parties dispute whether the preamble term "data interchange" requires construction. Plaintiff contends that Defendants seek to substitute words that embody some of the concepts

appearing in other elements of the claims. (Dkt. No. 91 at 35). Plaintiff argues that there is no reason to do so, and that it would confuse the jury. *Id.*

Defendants respond that the patentees explained the "present invention" as "a method of bar code data interchange which allows for data to be exchanged between computers using different operating systems." (Dkt. No. 102 at 47) (citing '586 Patent at 2:53–56). Defendants argue that performing data interchange requires sending an electronic document "A" having multiple bar codes to a receiver who would then receive the video bar codes from electronic document A to input into electronic document B. (Dkt. No. 102 at 47) (citing '586 Patent at 5:9–19, 7:37–45, 7:54–62, 8:3–9, 8:21–30, 8:44–50, 9:4–12; Dkt. No. 102-38 at 6:3-15).

Plaintiff replies that Defendants' addition of extra language to the preamble renders the "sending" and "means for receiving" elements of the claims redundant, and should be rejected. (Dkt. No. 106 at 21).

2. Analysis

The term "data interchange" appears in the preamble of claims 7 and 16 of the '586 Patent. Claim 7 is drafted from the perspective of the device creating an electronic document, and then sending the electronic document for decoding. Claim 7 does not recite "receiving" an electronic document. Claim 16 is drafted from the perspective of receiving an electronic document and decoding the electronic document. Claim 16 does not recite "sending" an electronic document.

Turning to Defendants' construction, the Court agrees that data interchange generally relates to sending and receiving electronic documents. However, as indicated by the claim language, data interchange has a number of different aspects that are explicitly recited in the respective claim limitation. Neither claim 7 nor 16 recite both sending and receiving electronic documents. It would therefore be improper to redraft the claims to include such additional steps,

which are not recited in the body of the claims. Moreover, to the extent that "sending" or "receiving" is recited in claims 7 and 16, Defendants' construction is redundant and unnecessary.

3. Court's Construction

The phrase **"operations for data interchange"** and the term **"data interchange"** will be given their **plain and ordinary meaning.**

FF."creating an electronic document" (term 39)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"creating an electronic document"	Plain and ordinary meaning	"using a markup language style sheet to generate an electronic document"

1. The Parties' Positions

The parties dispute (1) whether a style sheet is used to create an electronic document and (2) whether the style sheet must be a markup language style sheet. Plaintiff argues that Defendants' proposal only addresses "creating" and replaces it with "using a markup language style sheet to generate." (Dkt. No. 91 at 35). Plaintiff contends that "creating" is not so limited, and that the patent frequently uses "create" in the context of creating style sheets. *Id.* (citing '586 Patent at 3:40, 4:41, 4:52). Plaintiff further contends that the patent never uses the term "markup language" except when it is specifically referring to XML ("Extensible Markup Language"), which appears in unrelated claims. (Dkt. No. 91 at 35).

Defendants respond that the specification expressly provides that a "style sheet file 102 is used to create an electronic document 'A' 103 with tagged bar codes." (Dkt. No. 102 at 44) (citing '586 Patent at 4:64–65, Figures 1, 3). Defendants argue that the specification repeatedly and consistently explains the present invention as creating an electronic document with tagged bar codes through the use of style sheets. (Dkt. No. 102 at 45) (citing '586 Patent at 4:50–53, 5:57–61). According to Defendants, the scope of the claim term must be limited as they propose because

there is no other disclosure for how to create an electronic document with tagged bar codes without the use of a style sheet. (Dkt. No. 102 at 45).

Plaintiff replies that "creating" is not limited to "using a markup language style sheet to generate." (Dkt. No. 106 at 22). Plaintiff argues that the patent explicitly describes creating an electronic document without using a style sheet. *Id.* (citing '586 Patent at 5:49–53).

Defendants reply that Plaintiff's quote from the specification is directed to the only embodiment that does not require a style sheet because it utilizes "un-tagged bar coded information." (Dkt. No. 119 at 16) (citing '586 Patent at 5:49–53). According to Defendants, a style sheet is required to create the electronic document because claim 7 requires the bar codes to encode "data tags." (Dkt. No. 119 at 16).

2. Analysis

The term "creating an electronic document" appears in asserted claim 7 of the '586 Patent. The Court finds that the term should be given its plain and ordinary meaning. Defendants argue that the specification repeatedly and consistently explains the present invention as creating an electronic document with tagged bar codes through the use of style sheets. (Dkt. No. 102 at 45). The Court agrees that the use of a style sheet is the preferred embodiment. However, claim 7 recites "creating an electronic document" rather than a "style sheet." It is dependent claims 10, 11, and 14 that further qualify the electronic document as a "style sheet." These dependent claims indicate that when the patentees intended to limited the electronic document to a "style sheet," they did so explicitly. Accordingly, the Court finds that the specification's description of the preferred embodiments does not require limiting the "electronic document" to a "style sheet." *See, e.g., Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340, 1352 (Fed. Cir. 2010) ("[W]hen the specification uses a single embodiment to enable the claims, courts should not limit the broader

claim language to that embodiment unless the patentee has demonstrated a clear intention to limit the claim scope"); *Linear Tech. Corp. v. ITC*, 566 F.3d 1049, 1058 (Fed. Cir. 2009) ("We have repeatedly held that, even in situations when only one embodiment is disclosed, the claims generally should not be narrowed to cover only the disclosed embodiments or examples in the specification.").

Regarding Defendants' proposal to add "markup language," the Court rejects this language. Defendants contend that "markup language" is required "[t]o be consistent with the '586 patent's applicants' clear disavowal of claim scope with respect to 'data tags' as described above." As discussed above, the Court disagrees that the prosecution history includes a clear disavowal.

3. Court's Construction

The phrase **"creating an electronic document"** will be given its **plain and ordinary meaning.**

GG. "electronic document having a plurality of bar codes" / "electronic document comprising a plurality of bar codes" (term 40)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"electronic document having a plurality of bar codes" / "electronic document comprising a plurality of bar codes"	"electronic document comprising two or more bar codes"	"a document, created by software using bar code fonts, that contains electronic representations of at least two bar codes"

1. The Parties' Positions

The parties dispute: (1) whether an "electronic document having a plurality of bar codes" contains electronic representations of at least two bar codes and (2) whether an electronic document is created by software using bar code fonts.

Plaintiff contends that Defendants' construction improperly focuses on how an electronic document is created rather than what it is. (Dkt. No. 91 at 35). Plaintiff argues that Defendants erroneously assert that an electronic document must use bar code fonts. *Id.* According to Plaintiff,

bar code fonts are used only in a single embodiment and a dependent claim, and thus should not appear in claim 7. *Id.* (citing '586 Patent at 5:1–6). Finally, Plaintiff argues that replacing the easily understood "bar codes" with "electronic representations of . . . bar codes" will create unnecessarily confusion. (Dkt. No. 91 at 35).

Defendants contend that the patent expressly defines an "electronic document" to be a document created by software that contains electronic representations of bar coded information through the use of bar code fonts. (Dkt. No. 102 at 43-44) (citing '586 Patent at 4:64–5:6; Dkt. No. 102-38 at 6:3–15). Defendants further argue that the patentees even characterized this definition of "electronic document" as encompassing the "present invention." (Dkt. No. 102 at 44). Defendants contend that Plaintiff's construction ignores the specification's express definition of "electronic document," and uses "electronic document" in its construction, which is the term needing construction. *Id.*

Plaintiff replies that "creating" is not limited to generating by "software using bar code fonts." (Dkt. No. 106 at 22). Plaintiff argues that Defendants' proposal for term 39 demonstrates that they recognize that "creating" is not limited to software using bar code fonts. *Id.* Plaintiff further argues that "electronic document" was not expressly defined because the first two words of the passage Defendants cite are "[a]n example . . ." (Dkt. No. 106 at 22) (citing '586 Patent at 4:65). Plaintiff also argues that Defendants' construction impermissibly defines the "electronic document" by how it is purportedly created, not what it is. (Dkt. No. 106 at 22).

Defendants reply that the patent discloses Figure 2 as an example of an electronic document, and in the next sentence, the patentee defined the scope of the invention. (Dkt. No. 119 at 16) (citing '586 Patent at 4:65–5:3). Defendants contend that their construction comports with this definition. (Dkt. No. 119 at 16). According to Defendants, their construction describes the

attributes of the electronic document consistent with the scope of the invention. *Id.*

2. Analysis

The phrases "electronic document having a plurality of bar codes" and "electronic document comprising a plurality of bar codes" appears in asserted claims 7 and 16 of the '586 Patent. The Court finds that these phrases are used consistently in the claims and are intended to have the same general meaning in each claim. The Court further finds that the intrinsic evidence indicates that "electronic document having a plurality of bar codes" should be construed to mean "electronic document containing electronic representations of two or more bar codes." The specification states that "[a]n example of document 'A' 103 is depicted in FIG. 2 using software such as MICROSOFT EXCEL or WORD on a PC to create an electronic document. In the present invention, such *software creates documents that contain electronic representations of bar coded information* through the use of bar code fonts." '568 Patent at 4:64–5:6 (emphasis added). Figure 2 further illustrates an electronic document containing electronic representations of two or more bar codes. Plaintiff argues that "electronic representation of bar codes" creates confusion. (Dkt. No. 91 at 35). The Court agrees and finds that an "electronic document" would necessarily include "electronic" representations. Defendants have not provided a persuasive reason to further construe the representations as "electronic."

Regarding the issue of whether an electronic document is created by software using bar code fonts, the Court rejects this portion of Defendants' construction. The Court finds that bar code fonts are recited in dependent claim 8. Moreover, dependent claim 8 recites that the bar code fonts relate to "encoding" a data tag or data item. Specifically, dependent claim 8 recites "[t]he computer-readable storage device of claim 7, wherein the first data tag or first data item is encoded using a bar code font." Accordingly, the Court rejects this portion of Defendants' construction.

3. Court's Construction

The Court construes the phrase **"electronic document having a plurality of bar codes"** and the phrase **"electronic document comprising a plurality of bar codes"** to mean **"electronic document containing representations of two or more bar codes."**

HH. "decoding of a first one of the plurality of bar codes to recover a first data tag and a first data item" (term 45)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"decoding of a first one of the plurality of bar codes to recover a first data tag and a first data item"	See agreed-upon construction for "plurality" See IV's proposed construction for "data tag". The remainder of the claim should be given its plain and ordinary meaning.	"parsing one of the bar codes, stripping the data tag, and inputting that data into a field in another electronic document"

1. The Parties' Positions

The parties dispute whether the phrase "decoding of a first one of the plurality of bar codes to recover a first data tag and a first data item" is limited to a disclosed embodiment. Defendants argue that this limitation should be construed because it has no "readily apparent" ordinary meaning. (Dkt. No. 102 at 43). Defendants contend that this term means parsing one of the bar codes, stripping the data tag, and inputting that data into a field in another electronic document. *Id.* (citing '586 Patent at 5:40–48).

Plaintiff replies that a skilled artisan would understand that decoding bar coded data turns it into human readable form. (Dkt. No. 106 at 23). Plaintiff argues that the Court should reject Defendants' attempts to limit this term to a specific decoding method because the claim is not so limited. *Id.*

Defendants reply that the claim limitation requires decoding something specific to recover something else specific, and the specification teaches the only way the applicants contemplated

performing these operations. (Dkt. No. 119 at 15).

2. Analysis

The phrase "decoding of a first one of the plurality of bar codes to recover a first data tag and a first data item" appears in asserted claim 7 of the '586 Patent. Defendants contend that the only way the specification teaches performing the decoding operation is "parsing one of the bar codes, stripping the data tag, and inputting that data into a field in another electronic document." (Dkt. No. 119 at 15). Defendants point to step 127 of Figure 1 to support their construction. (Dkt. No. 102 at 43). Defendants are correct that this is the only embodiment disclosed for the decoding operation. In fact, step 127 of Figure 1 was used to construe the "means for decoding" phrase in claim 16. However, unlike the "means for decoding" phrase in claim 16, the phrase "decoding of a first one of the plurality of bar codes to recover a first data tag and a first data item" is not subject to 35 U.S.C § 112(6). Moreover, "it is improper to read limitations from a preferred embodiment described in the specification–even if it is the only embodiment–into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004). Defendants have therefore not provided persuasive evidence that the patentees intended to limit the claim as Defendants contend. Accordingly, the Court rejects limiting the phrase to the specific decoding method disclosed in Figure 1.

3. Court's Construction

The phrase **"decoding of a first one of the plurality of bar codes to recover a first data tag and a first data item"** will be given its **plain and ordinary meaning.**

II. "combining the first data tag and the first data item with a second data tag and a second data item recovered from a second one of the plurality of bar codes" (term 46)

Disputed Term	Plaintiff's Proposal	Defendants' Proposal
"combining the first data tag and the first data item with a second data tag and a second data item recovered from a second one of the plurality of bar codes"	IV proposes the following constructions for the following term: "combining": "storing together" See agreed-upon construction for "plurality" The remainder of the claim should be given its plain and ordinary meaning.	Indefinite under 35 U.S.C. § 112

1. The Parties' Positions

The parties dispute whether the phrase "combining the first data tag and the first data item with a second data tag and a second data item recovered from a second one of the plurality of bar codes" fails to "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). Plaintiff argues that during prosecution the examiner expressly stated that "combined" "can be interpreted as storing together." (Dkt. No. 91 at 25) (citing Dkt. Nos. 91-20, 91-21, 91-22). Plaintiff contends that a person skilled in the art reading the claim language in light of the specification and the prosecution history would understand the meaning of "combining" with reasonable certainty. (Dkt. No. 91 at 25) (citing '586 Patent at Figures. 6 and 9).

Defendants contend that there is no disclosure for this limitation in the original claims of the first parent application and the '586 Patent. (Dkt. No. 102 at 48). Defendants argue that it is unclear whether the first data tag and the first data item are combined with the second data tag and second data item before or after parsing, and there is no disclosure on how they are combined. *Id.*

Defendants further argue that the applicants did not confirm or agree with the examiner's interpretation of "combined" as "storing together." *Id.* (citing Dkt. No. 102-42 at 7). According to Defendants, the applicants declined to adopt the examiner's interpretation and stated that Figure 9 "combines information recovered from multiple bar codes." (Dkt. No. 102 at 48) (citing Dkt. No. 102-40 at 13).

2. Analysis

The phrase "combining the first data tag and the first data item with a second data tag and a second data item recovered from a second one of the plurality of bar codes" appears in asserted claim 13 of the '586 Patent. The Court finds that the phrase is not indefinite. During prosecution, the examiner expressly stated that "combined" "can be interpreted as storing together." (102-42 at 7). In addition, Figure 9 illustrates a pictorial representation of a data cache which has received a two-dimensional, tagged bar coded data. As illustrated in the figure, a first data tag and a first data item are combined or stored together with a second data tag and a second data item. The patentees also referred to Figure 9 to indicate that "combin[ing]" meant "storing together" (*e.g.*, in the same data cache) in a chart comparing the provisional application to the proposed claims at issue. (Dkt. No. 102-40 at 12-13). Accordingly, the Court finds that claim 13, when read in light of the specification and the prosecution history, provides "objective boundaries for those of skill in the art." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1366 (Fed. Cir. 2014).

3. Court's Construction

The Court finds that the phrase **"combining the first data tag and the first data item with a second data tag and a second data item recovered from a second one of the plurality of bar codes"** is not indefinite. The Court construes the term **"combining"** to mean **"storing together."**

V. CONCLUSION

The Court adopts the constructions above for the disputed and agreed terms of the Asserted Patents. Furthermore, the parties should ensure that all testimony that relates to the terms addressed in this Order is constrained by the Court's reasoning. However, in the presence of the jury the parties should not expressly or implicitly refer to each other's claim construction positions and should not expressly refer to any portion of this Order that is not an actual construction adopted by the Court. The references to the claim construction process should be limited to informing the jury of the constructions adopted by the Court.

So ORDERED and SIGNED this 29th day of November, 2017.

RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE